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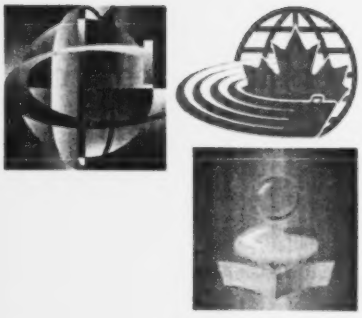
Integration of Internationally-educated Immigrants into the Canadian Labour Market: Determinants of Success



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Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

Acronyms

The following acronyms are used in this publication:

BA	Bachelor of Arts
BArch	Bachelor of Architecture
BCL	Bachelor of Civil Law
BSc	Bachelor of Science
CIP	Classification of Instructional Programs
DDS	Doctor of Dental Surgery
DMD	Doctor of Medical Dentistry
DVM	Doctor of Veterinary Medicine
FCR	Foreign Credential Recognition
HRSDC	Human Resources and Skills Development Canada
JD	Doctor of Jurisprudence
LLB	Bachelor of Laws
MA	Master of Arts
MArch	Master of Architecture
MD	Medical Doctor
MSc	Master of Science
n.e.c.	not elsewhere classified
n.o.s.	not otherwise specified
NOC	National Occupational Classification
NOC-S	National Occupational Classification – Statistics
NR	Non-regulated
PhD	Doctor of Philosophy
R	Regulated
RT	Regulated Trades

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Section 1

Executive summary

Unlike the waves of immigrants who arrived in the 1950s and 1960s, those arriving in Canada since the 1970s have possessed relatively high educational levels, making an enormous contribution to the pool of individuals in Canada with postsecondary qualifications. Upon their arrival however, many immigrants initially face difficulties finding employment related to their field of study as well as finding jobs that pay relatively high wages.

The successful integration of immigrants in the Canadian labour market is of interest to the Canadian public and to current and potential immigrants, alike. While different measures can be used to assess what would be considered a 'successful' integration for these immigrants, the present report focused exclusively on the following two 'positive' employment outcomes: 1) working in an occupation corresponding to their field of study or in an occupation requiring similar or higher skill levels, and 2) having earnings at or above the national median earnings calculated for the occupation corresponding best to their field of study.

In the context of this report, there is no attempt in trying to define 'precisely' what should be considered a 'successful' or a 'poor' integration for these immigrants into the Canadian labour market. The interpretation is left completely to the discretion of the reader as, in the opinion of the author, such a concept is arbitrary and subject to debate.

Logistic regression analysis produces odds ratios, which, in this study, are used to assess whether, other things being equal, internationally-educated immigrant paid workers with specific characteristics are more or less likely to successfully integrate in the Canadian labour market compared to those in another (reference) group. Using the 2006 Census, the logistic regression analysis reported in this report first considers the contribution of 'given' characteristics to the probability of achieving the two above-mentioned employment outcomes. 'Given' characteristics correspond to the following: immigrant status by period of landing and region of education.

Other variables are then added progressively in order to assess both their independent effects and whether they modify the effects of previously-added variables. These additional variables are: sex and age group, marital status and presence of children, level of education and major instructional program, province, territory and area of residence, language ability, visible minority status and, in the case of Employment outcome #1 regarding the likelihood of having a good education-job skills match, a variable defining the full/part-time and full/part-year status of employment.

The logic behind this approach is that immigrants possess certain 'given' characteristics (i.e., they either completed their highest level of education in Canada or abroad, and they landed in Canada during different time periods). Their outcomes in the Canadian labour market (positive or not) can then be influenced by various socio-demographic characteristics (i.e., sex, age, marital status, presence of children), educational characteristics (level of education and major instructional program), geographical location (province, territory and area of residence), as well as by their language ability in one of the two official languages, whether they belong to a visible minority group, and, in the case of Employment outcome #1, by the full/part-time and full/part-year status of employment.

Given the purpose of this report, which is to identify the factors and determinants most likely leading to a 'successful' integration of internationally-educated immigrants in the Canadian labour market, only individuals in the core working-age group of 25 to 64 with a postsecondary education who reported not attending school in 2006 and working for pay were included. To determine if these individuals were working in their field of study or in an equivalent occupation, only those who reported having completed their postsecondary education in one of the instructional programs leading to the targeted occupations as identified by the Foreign Credential Recognition (FCR) Program at Human Resources and Skills Development Canada (HRSDC) were selected (see Data and methodology section for more details).

As shown by the 2006 Census, internationally-educated immigrant paid workers were generally less likely than Canadian-born paid workers with a postsecondary education to report a good education-job skills or education-employment earnings matches. Internationally-educated immigrant paid workers were also less likely than their counterparts educated in Canada to report working in their field or in an equivalent occupation. Such comparison was not possible with regard to the likelihood of having a good education-employment earnings match as results were not statistically significant for full-time full-year immigrant paid workers with credentials from Canada.

Regions from which credentials were obtained had a clear impact on the likelihood of being employed in associated or equivalent occupations for these paid workers. Other than for immigrants with credentials from countries in Northern Europe (and Oceania, in the case of education-employment earnings match), immigrants who completed their highest level of postsecondary education in all other regions outside Canada were less likely than paid workers born in Canada to report 'positive' labour market outcomes.

Time elapsed since landing also figured among the characteristics and determinants more closely associated with 'positive' labour market outcomes for internationally-educated immigrant paid workers in 2006. In fact, those established in the country for more than ten years were generally more likely than their recent and very-recent counterparts to be working in the best corresponding or an equivalent occupation or to report a good education-employment earnings match. Factors noted in the literature that help to explain this finding include the discounting in the Canadian labour market of skills developed abroad and recognition that new immigrants, especially those arriving without pre-arranged employment, face a period of cultural and economic adjustment. One should note, however, that although these difficulties seem to ease over time, internationally-

educated immigrant paid workers established in the country for more than ten years were still generally less likely than their counterparts born in Canada to report such 'positive' outcomes.

Results from the 2006 Census showed that paid workers who studied in programs where there was a clear relationship between educational credentials and the ability to meet the requirements to work — such as for most regulated occupations and trades — generally had a higher likelihood of reporting 'positive' labour market outcomes than those who had studied in a field for which this relationship was not as clear. Paid workers who graduated from instructional programs leading to health occupations (i.e., mostly regulated occupations) were, for example, almost two times (194%) more likely than those with credentials in business, finance and administration to report working in their field of study or in an equivalent occupation. With regard to the second labour market outcome discussed in this report, full-time full-year paid workers who graduated from instructional programs leading to trades, transport and equipment operators and to health occupations were, respectively, 313% and 147% more likely than those with credentials in business, finance and administration to have earnings at or above the median for the occupation corresponding best to their field of study.

Provincially, paid workers living in Alberta and the territories were more likely than their counterparts in Ontario and the other provinces to report working in the best corresponding or an equivalent occupation or to report a good education-employment earnings match. On the other hand, paid workers residing in the Atlantic Provinces, followed closely by those in Quebec, had the lowest probabilities of having such 'positive' outcomes in the Canadian labour market.

Finally, the analysis found that the likelihood of having good education-job skills and education-employment earnings matches was higher for paid workers having knowledge of English only (and of both official languages in the case of the education-job skills match), compared to those with other language profiles. Being a man, living in a married or common-law relationship, having pre-school children, living in population centres, and working on a full-time full-year basis in the case of the education-job skills match, also figure among the characteristics and determinants more closely associated with a 'positive' integration of paid workers in the Canadian labour market. The influence of age and the fact of being a member of a visible minority group were not as clear when analyzed throughout the eight selected occupations and could not be generalized.

Section 2

Introduction

Immigration is an increasingly important component of population growth in Canada, with over 200,000 immigrants arriving in Canada each year. According to a report by Statistics Canada on the foreign-born population, immigrants were responsible for more than two-thirds (69%) of the population growth that occurred between 2001 and 2006 (Statistics Canada 2007).

Unlike the waves of immigrants who arrived in the 1950s and 1960s, those arriving in Canada since the 1970s have possessed relatively high educational levels, making an enormous contribution to the pool of individuals in Canada with postsecondary qualifications (Reitz 2007).

Upon their arrival however, many immigrants initially face difficulties finding employment related to their field of study as well as finding jobs that pay relatively high wages. As observed by Boudarbat and Chernoff (2009), if one of the main functions of education, obtained either inside or outside the country, is to provide skills that will be used in subsequent employment, then it would be an inefficient use of resources, for both individuals and for society as a whole, not to use their education in their jobs.

The 'successful' integration of immigrants in the Canadian labour market is of interest to the Canadian public and to current and potential immigrants, alike. While different measures can be used to assess what would be considered a 'successful' integration for these immigrants, the present report focuses exclusively on the following two positive employment outcomes: 1) working in an occupation corresponding to their field of study or in an occupation requiring similar or higher skill levels, and 2) having earnings at or above the national median earnings calculated for the occupation corresponding best to their field of study. The source of data and the methodology used to assess these two employment outcomes are presented in Section 3.

Sections 4 and 5 present a profile of internationally-educated paid workers and focus on the different characteristics and determinants more closely associated with an easier integration in the Canadian labour market: How likely are they to be working in their field of study or in an equivalent occupation? What is their likelihood of having employment earnings at or above the median level of earnings associated with the occupation corresponding best to their field of study? Different aspects are taken into account when examining these labour market outcomes. These include the time elapsed since landing, region of education, type of credential, as well as diverse socio-demographic characteristics such as sex, age group, marital status, presence of children, province, territory and area of residence, language ability, and visible minority status. Results for internationally-educated

immigrant paid workers are compared to their counterparts with a postsecondary credential earned in Canada and to the Canadian-born paid workers with a postsecondary education.

Given the current policy focus of the Foreign Credential Recognition (FCR) Program at Human Resources and Skills Development Canada (HRSDC) on the first group of occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications* at the time of undertaking this study, Section 6 presents similar results, but for these eight selected occupations. Finally, Section 7 presents a summary of the findings and some concluding remarks.

Section 3

Data and methodology

Data source

The data source for the analysis reported here is Statistics Canada's 2006 Census of Population.

Census questions relating to education changed substantially between 2001 and 2006, to reflect developments in Canada's education system and to take better account of characteristics of immigrants' education. These changes improved the quality of data and provided more precise information on educational attainment as well as fields of study. For the first time, Census information is available on the province, territory or country in which individuals attained their highest level of education. While this new information is central to the purpose of this report, the analysis will draw additional benefits from the extensive amount of information the Census collects on area of residence in Canada, characteristics of immigrants and labour market situation.

Concepts and definitions

Immigrant status and period of landing

Non-immigrants or '**Canadian-born**' are persons who are Canadian citizens by birth.

Immigrants are persons who are, or have ever been, landed immigrants in Canada (includes immigrants who landed in Canada prior to Census Day, May 16, 2006).

Very-recent immigrants are persons who have been landed immigrants to Canada for five years or less. In this study, it refers to those who arrived in Canada after 2000.

Recent immigrants are persons who have been landed immigrants to Canada for six to ten years. In this study, it refers to those who arrived in Canada from 1996 to 2000.

Established immigrants are persons who have been landed immigrants to Canada for more than ten years. In this study, it refers to those who arrived in Canada before 1996.

Non-permanent residents are persons from another country who, at the time of the Census, held a Work or Study Permit, or who were refugee claimants.

Immigrant status and region of education

Immigrants are distributed according to their region of education. They are said to be **internationally-educated** if they reported completing their highest level of education (i.e., certificate, diploma or degree) 'outside Canada,' and **Canadian-educated** if they reported completing it 'in Canada.'

For the purpose of this study, the following regions of education are considered for the **immigrant population**: Canada, North America, Latin America, Western Europe, Eastern Europe, Northern Europe, Southern Europe, Africa, West Central Asia and the Middle East, Eastern Asia, Southeast Asia, Southern Asia and Oceania (see Appendix 1 to view the detailed grouping of regions and countries of highest postsecondary education).

In the case of the **Canadian-born population**, the analysis includes all of those with a postsecondary education, independently of their region of education.

Paid workers: Refers to persons aged 25 to 64 who reported working for pay (i.e., mainly for wages, salaries, tips or commissions) in 2005.

Full-time full-year paid workers: Refers to persons aged 25 to 64 who reported working for pay 49 to 52 weeks during 2005, for 30 hours or more per week.

Methodology – Multivariate regression

'Integration in the Canadian labour market' is an arbitrary concept. For example, it may be understood as a notion of an economic convergence between the individual with respect to a number of statistical measures such as earnings, employment, education, etc. For this reason, there is no attempt in trying to define 'precisely' what should be considered a 'successful' or a 'poor' integration in the labour market for these immigrants. The interpretation is left completely to the discretion of the reader as, in the opinion of the author, such a concept is subject to debate. For the purpose of this study, the following two employment outcomes are used as a measure of 'successful integration in the Canadian labour market:'

1. **Employment outcome #1** – Working in an occupation corresponding best to their field of study or in an occupation requiring similar or higher skill levels (i.e., having a good education-job skills match); and
2. **Employment outcome #2** – Having employment earnings at or above the national median earnings of the occupation corresponding best to their field of study (i.e., having a good education-employment earnings match).

The logistic regression analysis reported in this report first considers the contribution of 'given' characteristics to the probability of achieving the two above-mentioned employment outcomes. 'Given' characteristics correspond to the following: immigrant status by period of landing and region of education.

The Canadian-born are used as the reference group for this variable in all models. Immigrants with postsecondary education from different regions are compared with the Canadian-born with a postsecondary education. The variable is constructed so as to combine three factors: region of education, period of landing and immigrant status (immigrant vs. Canadian-born). The observed differences are, therefore, the results of the effects of these three factors. This method offers

the advantage of making it possible to simultaneously compare Canadian-educated immigrants with the Canadian-born and internationally-educated immigrants with the Canadian-born. However, the disadvantage is that observed differences between the Canadian-born and immigrants educated in different regions cannot be solely attributed to the effect of region of education, since other factors, such as cohort effects and timing of economic cycles may also play a role in determining labour market outcomes.

Other variables are then added progressively in order to assess both their independent effects and whether they modify the effects of previously-added variables. These additional variables are: sex and age group, marital status and presence of children, level of education and major instructional program, province, territory and area of residence, language ability, visible minority status and, in the case of Employment outcome #1 regarding the likelihood of having a good education-job skills match, a variable defining the full/part-time and full/part-year status of employment.

The logic behind this approach is that immigrants do possess certain 'given' characteristics (i.e., they either completed their highest level of education in Canada or abroad, and they landed in Canada during different time period). Their outcomes in the Canadian labour market (positive or not) can then be influenced by various socio-demographic characteristics (i.e., sex, age, marital status, presence of children), educational characteristics (level of education and major instructional program), geographical location (province, territory and area of residence), as well as by their language ability in one of the two official languages, whether they belong to a visible minority group, and, in the case of Employment outcome #1, by the full/part-time and full/part-year status of employment.

Logistic regression analysis

Logistic regression analysis produces odds ratios, which, in this study, are used to assess whether, other things being equal, internationally-educated immigrant paid workers[1] with specific characteristics are more or less likely to successfully integrate in the Canadian labour market compared to those in another (reference) group.

For example, consider the likelihood of having a good education-job skills match for a woman as compared to a man. An odds ratio less than 1.0 implies that those in the group being considered are less likely to report working in their field of study or in an equivalent occupation than the reference group; an odds ratio greater than 1.0 implies that those in the group being considered are more likely to report working in such types of occupation than those in the reference category.

To illustrate, consider two scenarios: 1) males being the reference category and females having an odds ratio of 0.65, and 2) males being the reference category and females having an odds ratio of 1.75. The first scenario indicates that females are 35% less likely than males to have a good education-job skills match, whereas the second scenario indicates that females are 75% more likely than males to have such a match.

Population of study

Given the purpose of this report, which is to identify the factors and determinants most likely leading to a 'successful' integration of internationally-educated immigrants in the Canadian labour market, only individuals (excluding institutional residents and non-permanent residents) in the core working-age group of 25 to 64[2]

with a postsecondary education who reported not attending school in 2006 and working for pay (full-time full-year or not) were included. There were about 7.4 million individuals with such characteristics in Canada in 2006. These individuals represent about 43% of the 17.2 million Canadian-born and landed immigrants aged 25 to 64 in 2006.

To determine if these individuals were working in their field of study or in an equivalent occupation[3], only those who reported having completed their postsecondary education in one of the instructional programs leading to the targeted occupations as identified by the FCR Program at HRSDC were selected (see Appendix 2 for the list of targeted occupations). Of the 7.4 million paid workers aged 25 to 64 with a postsecondary education who were not attending school in 2006, about 4.9 million (or 67%) reported credentials leading to such types of occupations.

Major instructional programs

The instructional programs leading to the targeted occupations as identified by the FCR Program at HRSDC were selected based on the best possible match between a given occupation and the instructional program using the 2000 Classification of Instructional Programs (CIP) and the 2006 National Occupational Classification – Statistics (NOC-S) (see Appendix 3 for the concordance between instructional programs and targeted occupations).

For the purpose of this report, these instructional programs were grouped according to the skill type required for the best corresponding occupation: business, finance, and administration occupations; natural and applied sciences and related occupations; health occupations; occupations in social science, education, government service and religion; occupations in art, culture, recreation and sport; sales and service occupations; and trades, transport and equipment operators and related occupations.

The skill level is defined according to the National Occupational Classification Matrix 2006 produced by HRSDC (see Appendix 4 for more details on this Matrix and the skill level associated with the targeted occupations).

The population of study used in the different models differs slightly between the two employment outcomes. While the model used for Employment outcome #1 includes all of the 4.9 million paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations as identified by the FCR Program at HRSDC, the model used for the Employment outcome #2 only kept those who reported working for pay on a full-time full-year basis (that is, 3.3 million out of 4.9 million). This additional filter was added to eliminate earnings differences attributable to the number of hours worked throughout the year. Individuals working on a part-time basis were kept for the first model as this situation may represent one of the factors influencing the likelihood of working in the best corresponding or in an equivalent occupation.

Following from these selection criteria, the population of study for the two measured employment outcomes is distributed as follows:

Table 3.1

Distribution of population of study by employment outcome, immigrant status, location of study and period of landing, Canada, 2006

	Population of study	
	All paid workers (Employment outcome #1)[1]	Full-time full-year paid workers (Employment outcome #2)[2]
	number	
All individuals	**4,924,235**	**3,320,930**
Canadian-born with a postsecondary education	**3,733,460**	**2,562,965**
Internationally-educated immigrants	**617,930**	**372,240**
Very-recent immigrants	168,745	78,075
Recent immigrants	138,495	88,310
Established immigrants	310,685	205,855
Canadian-educated immigrants	**572,845**	**385,725**
Very-recent immigrants	20,255	10,870
Recent immigrants	43,490	26,650
Established immigrants	509,105	348,200

1. Employment outcome #1 refers to the likelihood of having a good education-job skills match.
2. Employment outcome #2 refers to the likelihood of having a good education-employment earnings match.

Note: Population of study includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

A note on self-employed workers

Self-employed workers are excluded from this study since their earnings distribution differs systematically from that of workers who work for wages and salaries (i.e., work for pay). As Census income data follows definitions used in tax files, this is likely related to the way in which self-employed workers report their income. Since self-employed workers are able to claim expenses for their businesses, they frequently report negative self-employment earnings. As shown in a recent Statistics Canada study on the high education / low income paradox, self-employed workers are often over-represented in the lowest earnings category (Zeman, McMullen and de Broucker 2010).

For the purpose of this study, workers were considered to be self-employed if they reported that their main job[4] was as a self-employed worker. Table 3.2 shows the proportion of self-employed workers in 2005 aged 25 to 64 among all workers within the same age group by immigrant status, location of study and period of landing. As shown in this table, a larger proportion of internationally-educated immigrants (8%) than Canadian-born with a postsecondary education (7%) and Canadian-educated immigrants (7%) were self-employed in 2005. This situation was mostly attributable to internationally-educated immigrants established in Canada for more than ten years, at 10%. In comparison, about 8% of recent and 6% of very-recent internationally-educated immigrants reported being self-employed during that year.

Table 3.2

Employment status of workers aged 25 to 64 with a postsecondary education by immigrant status, location of study and period of landing, Canada, 2006

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
All workers	**4,016,325**	**619,510**	**675,640**	**180,430**	**150,530**	**344,685**
Paid workers	3,733,460	572,845	617,930	168,745	138,495	310,685
Self-employed workers	277,265	45,675	55,835	11,195	11,535	33,110
Other workers	5,600	990	1,875	490	495	890

Note: Includes workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

Section 4

Employment outcome #1 – Education-job skills match

The successful integration of immigrants in the Canadian labour market is of interest to the Canadian public and to current and potential immigrants, alike. Achieving Canada's full economic potential requires that immigrants are able to use their skills and experience in the Canadian labour market.

As mentioned in the previous section, only paid workers aged 25 to 64 not attending school in 2006 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC are analysed throughout this report. For simplicity in the text, they will be labelled as 'paid workers' or 'full-time full-year paid workers,' depending on the employment outcome being discussed.

4.1 Profile of internationally-educated immigrant paid workers

As a starting point in understanding the integration of internationally-educated immigrant paid workers in the Canadian labour market, it is important to learn more about the size and characteristics of this population compared to those who completed their education in Canada and the Canadian-born paid workers with a postsecondary education.

Socio-demographic characteristics

One in two internationally-educated immigrant paid workers reported being established in the country for more than ten years

In 2006, about 617,900 internationally-educated immigrant paid workers aged 25 to 64 not attending school reported having a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC As shown in Table 4.1, the largest share of these internationally-educated immigrants (50%) reported being established in the country for more than ten years (i.e., established immigrants), followed by very-recent immigrants, at 27%, and recent immigrants, at 22%.

Table 4.1

Socio-demographic characteristics of paid workers aged 25 to 64 with a postsecondary education by immigrant status, location of study and period of landing, Canada, 2006

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Total	**3,733,460**	**572,845**	**617,930**	**168,745**	**138,495**	**310,685**
Sex						
Women	1,848,850	264,300	265,960	69,445	57,630	138,880
Men	1,884,605	308,545	351,970	99,305	80,865	171,800
Age group						
25 to 34	921,435	129,480	91,485	60,590	22,580	8,315
35 to 44	1,145,915	179,785	211,390	74,855	67,990	68,540
45 to 54	1,115,345	156,660	188,705	28,490	39,770	120,445
55 to 64	550,765	106,925	126,350	4,810	8,160	113,390
Marital status						
Divorced	378,110	49,765	37,865	5,490	6,765	25,610
Married or common-law	2,571,820	397,545	509,555	143,390	117,740	248,420
Separated	130,770	20,795	18,740	3,695	3,895	11,145
Single	612,090	98,570	44,475	15,395	9,140	19,945
Widowed	40,670	6,180	7,300	775	955	5,565

Note: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

A larger proportion of men than women were found among internationally-educated immigrant paid workers

While no difference was observed between the proportion of men and women among Canadian-born paid workers aged 25 to 64 in 2006, a larger proportion of men than women was found among the immigrant paid workers' population: 57% vs. 43% for immigrants educated abroad and 54% vs. 46% for those educated in Canada (Table 4.1).

More than six in ten internationally-educated immigrant paid workers were in the prime-working age group of 35 to 54

As shown in Table 4.1, a larger proportion of internationally-educated immigrant paid workers (65%) were in the prime-working age group of 35 to 54 in 2006 compared to their Canadian-educated counterparts (59%) and the Canadian-born with a postsecondary education (61%). The remaining 35% were distributed between 55 to 64 year-olds (20%) and 25 to 34 year-olds (15%). At 83%, internationally-educated immigrant paid workers were also more likely than Canadian-educated immigrants (69%) and the Canadian-born (69%) to be married or living in a common-law relationship.

Educational characteristics

Internationally-educated immigrant paid workers are highly-educated

Internationally-educated immigrant paid workers in the core working-age group of 25 to 64 are highly-educated. In fact, as shown by the 2006 Census, about seven in ten internationally-educated immigrant paid workers reported having completed a university education. This is substantially more than what was observed for their Canadian-educated counterparts (50%) or for the Canadian-born with a postsecondary education (40%) (Table 4.2).

Table 4.2

Education characteristics of paid workers aged 25 to 64 with a postsecondary education by immigrant status, location of study and period of landing, Canada, 2006

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Total	**3,733,460**	**572,845**	**617,930**	**168,745**	**138,495**	**310,685**
Highest level of education						
University	1,508,820	284,195	434,335	140,850	110,995	182,485
College, CEGEP or other non-university	1,403,120	195,630	123,555	20,105	19,415	84,035
Apprenticeship or trades	821,520	93,025	60,045	7,790	8,085	44,160
Region where highest level of education was obtained						
Canada	3,672,915	572,850	...	...	...	...
North America	43,440	...	42,050	8,380	7,445	26,230
Latin America	570	...	43,215	12,695	6,965	23,555
Western Europe	3,085	...	34,680	8,220	6,715	19,745
Eastern Europe	115	...	80,170	19,925	19,800	40,455
Northern Europe	8,505	...	65,625	7,670	6,690	51,260
Southern Europe	580	...	27,765	3,200	6,530	18,040
Africa	400	...	34,865	11,740	7,615	15,505
West Central Asia and the Middle East	520	...	28,845	9,090	7,870	11,885
Eastern Asia	335	...	83,110	30,445	27,310	25,355
Southeast Asia	115	...	86,065	22,770	16,325	46,970
Southern Asia	125	...	83,715	32,545	23,925	27,245
Oceania	2,755	...	7,820	2,070	1,310	4,440
Major instructional program						
Business, finance and administration	989,925	150,970	143,080	38,820	29,990	74,265
Natural and applied sciences	772,040	175,500	254,780	82,760	69,150	102,870
Health	450,665	61,220	62,410	14,965	11,225	36,215
Social science, education, government service and religion	701,610	83,230	82,720	20,300	16,600	45,820
Art, culture, recreation and sport	97,760	17,925	16,960	4,750	3,875	8,335
Sales and service	180,505	26,145	16,325	2,495	2,470	11,360
Trades, transport and equipment operators	540,960	57,860	41,655	4,645	5,195	31,815

... not applicable

Note: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

Higher proportion of university degree-holders among internationally-educated immigrant paid workers established in the country for less than ten years

This high proportion of internationally-educated immigrant paid workers with a university degree is mostly attributable to very-recent and recent immigrants, at 84% and 80%, respectively. Although at a lower proportion (59%), internationally-educated immigrant paid workers established in Canada for a longer period were also more likely than their Canadian-educated counterparts or Canadian-born paid workers with a postsecondary education to report having completed a university degree. Furthermore, at 30%, internationally-educated immigrant paid workers were much less likely than their Canadian-educated counterparts (50%) and Canadian-born paid workers with a postsecondary education (60%) to have college or trades credentials as their highest level of postsecondary education (Table 4.2). In part, that reflects the fact that in Canada, the college sector is highly developed, whereas most other countries do not offer credentials at the college level.

High proportion of postsecondary credentials from regions in Asia

Not surprisingly, the top regions from which very-recent and recent internationally-educated immigrant paid workers received their highest level of education were very similar to the regions from which these individuals immigrated: Eastern Asia, Southeast Asia, Eastern Europe, Southern Asia and Northern Europe (see Appendix 1 for the list of countries corresponding to these regions of study) (Table 4.2).

Four in ten internationally-educated immigrant paid workers reported postsecondary credentials leading to occupations in natural and applied science

At 41%, the largest share of these internationally-educated immigrant paid workers were found in instructional programs leading to occupations in natural and applied sciences such as engineers, engineering technicians and architects, followed by those leading to occupations in business, finance and administration (23%), occupations in social science, education, government service and religion (13%) and in health occupations (10%). About 7% reported postsecondary credentials leading to trades, transport and equipment operators and related occupations, while the remaining 6% were distributed almost evenly between occupations in art, culture, recreation and sport (3%) and those related to sales and service (3%) (Table 4.2).

Province, territory and area of residence

The large majority of internationally-educated immigrant paid workers reported living in the three most populated provinces

The large majority (86%) of internationally-educated immigrant paid workers reported living in the three most populated provinces of Ontario, British Columbia and Quebec. As shown in Table 4.3, Ontario alone received more than half of these immigrants (57%), followed by British Columbia (18%) and Quebec (12%). At 10%, Alberta ranked fourth in terms of the share of internationally-educated immigrant paid workers aged 25 to 64 who reported a credential leading to one of

the targeted occupations. The Atlantic Provinces, Manitoba, Saskatchewan and the territories, on the other hand, each received 2% or less of these internationally-educated immigrant paid workers.

Table 4.3

Province, territory and area of residence of paid workers aged 25 to 64 with a postsecondary education by immigrant status, location of study and period of landing, Canada, 2006

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Total	**3,733,460**	**572,845**	**617,930**	**168,745**	**138,495**	**310,685**
Province territory of residence						
Atlantic provinces	356,935	9,830	6,620	1,550	1,010	4,060
Quebec	1,067,830	76,990	73,380	25,165	14,435	33,780
Ontario	1,213,270	317,180	351,780	93,630	82,500	175,655
Manitoba	126,950	13,305	13,190	4,365	2,105	6,715
Saskatchewan	122,440	4,530	4,120	1,035	705	2,380
Alberta	433,980	57,965	59,125	17,100	11,630	30,390
British Columbia	399,230	92,250	108,880	25,670	25,980	57,230
Territories	12,825	795	845	230	140	475
Area of residence						
Rural area	786,280	35,925	26,200	3,920	3,615	18,670
Population centre	2,947,180	536,920	591,730	164,830	134,885	292,015

Note: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

More than nine in ten internationally-educated immigrant paid workers reported living in population centres

Similar to their Canadian-educated counterparts (at 94%), the vast majority (96%) of internationally-educated immigrant paid workers in the core working-age group of 25 to 64 reported living in population centres (i.e., areas with a population of at least 1,000 and a density of 400 or more people per square kilometre) in 2006 (Table 4.3). This compares to about 79% for the Canadian-born paid workers with a postsecondary education.

Population centres and rural areas

A **population centre** has a minimum population concentration of 1,000 persons and a population density of at least 400 persons per square kilometre, based on the current census population count. On-reserve census subdivisions (CSDs) are excluded from this category.

Rural areas, on the other hand, include remote and wilderness areas and agricultural lands, as well as small towns, villages and other populated places with a population of less than 1,000. On-reserve CSDs are excluded from this category.

Linguistic portrait

Internationally-educated immigrant paid workers come from many countries, more than 200 in total according to the 2006 Census. The shift in the sources of immigration to Canada since the 1970s to source countries from regions other than Europe has had implications for the linguistic portrait of the population in Canada. According to a recent study by Statistics Canada in 2010, more than 80% of internationally-educated immigrants aged 25 to 64 who arrived in Canada in the previous ten years reported a mother tongue other than English or French in 2006. This is considerably higher than the proportion observed for their counterparts established in the country for more than ten years, at 68% (Plante 2010).

Almost all internationally-educated immigrant paid workers reported knowledge of English and/or French

Despite this high proportion of internationally-educated immigrant paid workers with a mother tongue other than English or French, the large majority reported being able to conduct a conversation in one of Canada's two official languages in 2006. Knowledge of English alone represented the bulk of this group, at about 84%, followed by knowledge of both English and French (12%) and knowledge of French only (3%). Only a small proportion (1%) reported not being able to conduct a conversation in either English or French (Table 4.4).

Table 4.4

Linguistic portrait of paid workers aged 25 to 64 with a postsecondary education by immigrant status, location of study and period of landing, Canada, 2006

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Total	**3,733,460**	**572,845**	**617,930**	**168,745**	**138,495**	**310,685**
Ability to conduct a conversation in one of Canada's official languages						
English only	2,301,735	456,210	517,915	136,445	118,985	262,495
French only	501,790	11,545	16,170	6,375	3,300	6,495
Both English and French	929,165	103,820	74,985	21,340	14,090	39,550
Neither English nor French	765	1,280	8,860	4,590	2,120	2,145

Note: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

Internationally-educated immigrant paid workers established in the country for ten years or less were more likely to report not being able to conduct a conversation in one of the two official languages

Although these proportions are very low, very-recent (3%) and recent immigrants (2%) were more likely than their counterparts established in the country for more than 10 years (1%) to report not being able to conduct a conversation in either official language (Table 4.4). Official language proficiency is an important issue for immigrant adjustment in Canada. A recent Statistics Canada survey, the

Longitudinal Survey of Immigrants to Canada, indicated that learning English or French was one of the challenges frequently cited by newcomers, second only to finding an adequate job (Statistics Canada 2008a).

Ethnocultural diversity

According to another report by Statistics Canada on the ethnocultural diversity of the nation's population, the visible-minority population has grown steadily over the past 25 years, rising from slightly less than 5% of the total population in 1981, to 9% in 1991, 11% in 1996, 13% in 2001 and 16% in 2006 (Statistics Canada 2008b). The growth of the visible-minority population was due largely to the increasing number of recent immigrants who were from non-European countries.

Visible minority population

Visible minorities are defined as 'persons, other than Aboriginal persons, who are non-Caucasian in race or non-white in colour.' The following groups are included in the visible minority population: Chinese, South Asians, Blacks, Arabs, West Asians, Filipinos, Southeast Asians, Latin Americans, Japanese, Koreans and other visible minority groups, such as Pacific Islanders.

In fact, as shown in Table 4.5, while seven in ten internationally-educated immigrant paid workers established in the country for ten years or less reported being part of a visible minority group in 2006, this was the case for only about half (53%) of their counterparts established in Canada for more than ten years. This is not surprising considering that, compared to internationally-educated immigrants established in Canada for more than ten years, larger proportions of very-recent and recent immigrants to Canada reported being part of one of the different Asian visible-minority groups such as Chinese, South Asian, Filipino, Southeast Asian, West Asian, Korean and Japanese (Plante 2010).

Table 4.5

Ethnocultural diversity of paid workers aged 25 to 64 with a postsecondary education by immigrant status, location of study and period of landing, Canada, 2006

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Total	3,733,460	572,845	617,930	168,745	138,495	310,685
Member of a visible minority group						
Member of a visible minority group	96,755	311,405	377,850	120,280	94,265	163,310
Not a member of a visible minority group	3,539,860	260,710	239,825	48,395	44,190	147,240
Aboriginal self-reporting	96,840	730	255	75	45	135

Note: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

4.2 The many factors leading to a good education-job skills match

Understanding how and why individuals are matched to their employment (i.e., education-job skills match/mismatch) is of concern to labour market and immigration policy analysts and to immigrants. When interpreting the results, one should keep in mind that, for different reasons, not all individuals wish to work or be employed in an occupation related to their field of study. Furthermore, given that only the highest postsecondary credential (and no previous diploma, certificate or degree) is taken into consideration when matching to the actual occupation, the proportion of good education-job skills matches may be underestimated in some cases (e.g., individual with a credential in engineering technologies/technicians programs who also did a master's degree in business administration and who reported working as an engineering technician). In the case of credentials obtained abroad, another unknown is whether those credentials would have led to a good education-job skills match in their country of origin.

Brief review of the education-job skills match literature

Most studies on education-job skills match focus on how a given level of education affects the quality of the match. However, a careful examination of the literature reveals there has been growing interest in the relationship between job skills match/mismatch and field of study, as well.

Several authors (Wolbers 2003; Grayson 2004; Garcia-Espejo and Ibanez 2006; Robst 2007; Krahn and Bowlby 1999; Storen and Arnesen 2006; and Heijke, Meng and Ris 2003) have found that graduates from occupation-specific programs have a much higher degree of match than those in more general academic programs. This is attributed to the fact that such programs provide specific skills meant for specific occupations (Robst 2007).

The quality of the education-job skills match is also found to be associated with some characteristics of the job. For instance, having a full-time job is associated with a better match (Wolbers 2003), as is having a permanent job (Wolbers 2003; Witte and Kalleberg 1995; Krahn and Bowlby 1999). Other research suggests that this is not always the case, however, as in some situations, having a temporary contract increases the strength of the education-job skills match (Garcia-Espejo and Ibanez 2006).

Those who found work in blue-collar positions or lower tier services had a poorer match than white-collar or professional occupations (Witte and Kalleberg 1995; Garcia-Espejo 2006; Krahn and Bowlby 1999). This is likely attributable to the fact that the higher the position, the more likely it is to require specific credentials.

As for demographic factors, there appears to be some contradictions concerning the effects of age, as Krahn and Bowlby (1999) found that older workers had a slightly better match than younger workers, while Robst (2007), Wolbers (2003), and Witte and Kalleberg (1995) found the opposite.

Other demographic results show that people who were never married, as well as persons with disability tend to have a poorer education-job skills match. Jones and Sloane (2009) also provide evidence that individuals with disabilities

are significantly more likely to be mismatched in the labour market. Being female slightly increases the likelihood of match in some studies (Wolbers 2003; Witte and Kalleberg 1995; Robst 2007), slightly decreases its likelihood in others (Krahn and Bowlby 1999), and makes no difference in others (Garcia-Espejo and Ibanez 2006; Storen and Arnesen 2006). This discrepancy is difficult to explain.

There appears to be some contradictions concerning the effects of 'visible minority or ethnic origin.' Many studies have confirmed that visible minorities are penalized in the labour market in earnings and occupation status, and that such penalty tends to persist after variations in human capital and other factors have been taken into account (Lautard and Loree, 1984; Lautard and Guppy, 1999; Li, 1988; Geschwender, 1994). Analyses based on Canadian censuses and survey data have indicated that Canadians of European origins had an income advantage over visible minorities and that a substantial earnings disparity remains after controlling for variations in human capital, demographic characteristics and other job-related factors (Beach and Worswick, 1993; Boyd, 1984, 1992; Li, 1992, 2000; Pendakur and Pendakur, 1998). Galarneau and Morissette (2008) find that a large proportion of immigrants to Canada with university degrees are in jobs with low educational requirements. The highest rates of mismatch were observed among immigrants from Southern and Southeast Asia. Boudarbat and Chernoff (2009), on the other hand, found that although "being a member of a visible minority group" had a negative coefficient in the likelihood of having an education-job skills match, the difference was not significant.

Logistic regression model

The main indicator used to determine if individuals are working in jobs corresponding to their field of study or in an equivalent occupation is the 'education-job skills match' variable. For the purpose of this report, the methodology used to determine if an individual has a good education-job skills match is not limited to a match between a given instructional program and the best corresponding occupation, but also includes the concept of 'skill level' (i.e., the match between a given instructional program and an occupation requiring similar or higher skill levels) as presented in the 'National Occupational Classification Matrix 2006' produced by HRSDC (see Appendices 3 and 4 for more detail on the methodology).

Hence, for each given instructional program, an individual can be:

- Working in the best corresponding or in an equivalent occupation. Individuals in this category are said to be having a good education-job skills match; or
- Working in an occupation requiring lower skill levels. Individuals in this category are said to be having an education-job mismatch (i.e., are working in occupations for which they are over-qualified).

In the logistic regression model used for Employment outcome #1, the dependent variable equals 1 if a paid worker has a good education-job skills match and 0 otherwise. Variables are compared through the means of an odds-ratio, which indicates the extent to which a given variable contributes to a good education-job skills match compared to the base or reference category. For example, a variable with an odds ratio of 0.5 means that that variable has half the likelihood of leading to a good match as the reference category. An odds ratio above 1 indicates that a

given variable is more likely to lead to a good education-job skills match than the reference category.

As reported in the Data and methodology section, the logistic regression analysis first considers the contribution of 'given' characteristics to the probability of having a good education-job skills match: immigrant status by period of landing and region of education.

The sex and age group, marital status and presence of children, level of education and major instructional program, province, territory and area of residence, the language ability status variable, the visible minority status variable, and the variable defining the full/part-time and full/part-year status of employment are then added progressively in order to assess both their independent effects and whether they modify the effects of previously-added variables.

The logic behind this approach is that immigrants do possess certain 'given' characteristics (i.e., they either completed their highest level of education in Canada or abroad, and they landed in Canada during different time period). Their likelihood of having a good education-job skills match can then be influenced by various socio-demographic and educational characteristics, their province, territory and area of residence, as well as by their language ability in one of the two official languages, whether they belong to a visible minority group, and by the full/part-time and full/part-year status of employment.

Results

According to the 2006 Census, among the 617,930 internationally-educated immigrant paid workers aged 25 to 64 and not attending school in 2006 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC, less than half (48%) reported working in their trained occupation or in an occupation requiring similar or higher skill levels. This proportion increased to 67% for their Canadian-educated counterparts and to 70% for Canadian-born paid workers with a postsecondary education (Table 4.6).

Table 4.6

Education-job skills matching status of paid workers aged 25 to 64 with a postsecondary education by immigrant status, location of study and period of landing, Canada, 2006

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Total	**3,733,460**	**572,845**	**617,930**	**168,745**	**138,495**	**310,685**
Education-job skills matching status						
Working in the best or equivalent occupation	2,604,735	385,995	298,610	66,950	66,410	165,250
Working in occupations requiring lower skill levels	1,128,725	186,850	319,320	101,800	72,085	145,435

Note: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

'Given' characteristics

The following section examines the extent to which internationally-educated immigrant paid workers who have a field of study that typically leads to a targeted occupation were actually working in their field of study or in an equivalent occupation. It then identifies the characteristics and determinants more closely associated with a 'successful' employment outcome in the Canadian labour market (i.e., 'given' characteristics correspond to region of education and time elapsed since landing).

Region of education

Internationally-educated immigrant paid workers were less likely than Canadian-born paid workers to be employed in their field of study or in an equivalent occupation

Results from the 2006 Census showed that immigrant paid workers (either educated in Canada or abroad) were generally less likely than Canadian-born paid workers with a postsecondary education to report working in the best corresponding or in an equivalent occupation. As shown in Table 4.7, while Canadian-educated immigrant paid workers were about 10% less likely than Canadian-born paid workers to report a good education-job skills match in 2006, the likelihood for their internationally-educated counterparts were generally lower.

Table 4.7 (Model 4.1)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64, Canada, 2006

	Paid workers
Paid workers	odds ratio
Canadian-born with a postsecondary education[1]	**1.00**
Region of education of immigrants	
Canada	0.90***
North America	0.96
Latin America	0.30***
Western Europe	0.75***
Eastern Europe	0.39***
Northern Europe	1.10***
Southern Europe	0.46***
Africa	0.44***
West Central Asia and the Middle East	0.42***
Eastern Asia	0.38***
Southeast Asia	0.17***
Southern Asia	0.25***
Oceania	0.91

*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 4.1: After controlling for immigrant status and region of education.

Regions from which internationally-educated immigrant paid workers reported completing their highest level of education had a clear influence on the likelihood of working in their field of study or in an equivalent occupation. In fact, as shown in Table 4.7, while immigrants with credentials from countries in Northern Europe (i.e., mostly from the United Kingdom) were about 10% more likely than Canadian-born paid workers to report a good education-job skills match, those who completed their highest level of postsecondary education in all other regions outside Canada showed the reverse, with odds ratios ranging from 0.17 for immigrants with credentials from countries in Southeast Asia to 0.75 for those with credentials from countries in Western Europe. Region of education may not be the only factor influencing the likelihood of having a good education-job skills match. Other factors, such as the time since landing in Canada, may also have an influence on the likelihood that these immigrant paid workers were working in the best corresponding or in an equivalent occupation. In fact, as found by Plante 2010, larger proportions of established immigrants reported coming from Northern Europe compared to countries in Southeast Asia and Western Europe. Differences in the match for immigrant paid workers with credentials from countries in North America and Oceania, compared with Canadian-born, were not statistically significant.

Time elapsed since landing

The lower odds ratios among immigrants of working in their field of study or in an equivalent occupation suggest that some individuals encounter difficulties in finding work in the occupations that reasonably match their education. However, the likelihood of finding a good education-job skills match increased with time spent in Canada, to some extent. As shown in Table 4.8, immigrant paid workers established in the country for more than ten years were generally more likely than their very-recent — and of most of their recent counterparts — to be working in the best corresponding or an equivalent occupation. This was the case for all Canadian-educated and internationally-educated immigrant paid workers. Results from the 2006 Census showed that after more than ten years in Canada, immigrant paid workers with credentials from countries in North America and Northern Europe were even 2% and 14% more likely than paid workers born in Canada to report working in an occupation corresponding best to their field of study or in an equivalent occupation. Results were not statistically significant for immigrant paid workers with credentials from Western Europe and Oceania.

Table 4.8 (Model 4.2)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64, Canada, 2006

Effect	Very-recent immigrants	Recent immigrants	Established immigrants
	Column 1	Column 2	Column 3
	odds ratio		
Canadian-born with a postsecondary education[1]	**1.00**	**1.00**	**1.00**
Region of education of immigrants			
Canada	0.72***	0.72	0.92***
North America	0.86***	0.86	1.02**
Latin America	0.27***	0.31*	0.32**
Western Europe	0.75***	0.75	0.75
Eastern Europe	0.26***	0.47***	0.43***
Northern Europe	0.87**	1.12**	1.14***
Southern Europe	0.27***	0.27	0.59***
Africa	0.28***	0.49***	0.59***
West Central Asia and the Middle East	0.39***	0.39	0.45**
Eastern Asia	0.26***	0.43***	0.50***
Southeast Asia	0.14***	0.15*	0.19***
Southern Asia	0.21***	0.29***	0.28***
Oceania	0.83	0.83	0.83

* $p \leq 0.05$
** $p \leq 0.01$
*** $p \leq 0.001$
1. Reference category.

Notes: These odd ratios come from a single regression but the odd ratios are presented in separate columns to improve readability.

Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 4.2: After controlling for immigrat status, region of education and period of landing.

As noted in the literature, one important reason for the relative disadvantage in the labour market of very-recent immigrants compared to immigrants established in the country for a longer period of time is that the skills immigrants have acquired in their home country are often not directly transferable to the host economy. Furthermore, as reported by Reitz (2007), newly-arrived immigrants nearly always experience a period of adjustment in the new country, including adjustment in the labour market. This is particularly true for those from diverse cultural backgrounds and arriving without pre-arranged employment, a situation which is typical for most immigrants to Canada. Over time, these initial difficulties can be overcome more or less successfully and employment and earnings levels rise.

The analysis reported here finds that the magnitude of that 'improvement over time' seems to vary according to the region from which the highest postsecondary credential was obtained. As shown in Table 4.8 (columns 1 and 3), paid workers with credentials from countries in Southern Europe and Africa showed the highest 'improvement over time' with gains of more than 30 percentage points in the likelihood of having a good education-job skills match between very-recent and established immigrants. This was followed by immigrants with credentials earned in Northern Europe (a 27 percentage-point increase), Eastern Asia (a 24 percentage-point increase), Eastern Europe (a 17 percentage-point increase) and North America (a 16 percentage-point increase). However, gains of less than 10 percentage points were observed between very-recent and established immigrant

paid workers with credentials from countries in Latin America (5 percentage points), Southeast Asia (5 percentage points), West Central Asia and the Middle East (6 percentage points), and Southern Asia (7 percentage points). In comparison, there was an increase of about 20 percentage points in the likelihood of working in the best corresponding or in an equivalent occupation between very-recent Canadian-educated immigrants and those established in the country for more than ten years. Improvement over time was not statistically significant for immigrant paid workers educated in Western Europe and Oceania.

Although the likelihood of finding a good education-job skills match generally increase with time, immigrant paid workers with credentials from Southeast Asia, Southern Asia, Latin America, Eastern Europe, West Central Asia and the Middle East and Eastern Asia were still more than 50% less likely than paid workers born in Canada to report such a positive employment outcome after more than ten years in the country.

That being said, it is also important to note that the likelihood of being employed in the corresponding field or in an equivalent occupation may not be entirely attributed to the effect of 'time elapsed since landing' since compositional change of immigrants who landed during different periods, labour market conditions as well as other factors such as age, language skills, lack of Canadian work experience, strength of social networks, knowledge of the Canadian labour market, difference in the quality of education, and barriers to recognition of international credentials and work experience may also contribute to differences among groups.

Bonikowska, Green and Riddell (2008) reported that although internationally-educated immigrants acquire Canadian work experience over time, another part of the explanation lies in differences in skill levels, especially between foreign-educated immigrants and those who received some or all of their education in Canada. In fact, research has found that skill levels in prose literacy, document literacy, numeracy and problem-solving of immigrants who received all of their education abroad were lower than those of immigrants who received part or all of their education in Canada.

It may also be expected that the longer an immigrant is unable to practice in his or her field of expertise, the more likely he or she will experience "skills atrophy," reducing their chances of finding work in their field of expertise (Lochhead 2002). Economic factors, such as the state of the economy during a particular period of landing, will also play a role in this regard.

Socio-demographic characteristics

After having considered the contribution of the immigrant status, the region of education and the time elapsed since landing to the probability of having a good education-job skills match, the following section examines the influence of various socio-demographic factors on achieving such a positive employment outcome for immigrant paid workers and paid workers in general. This section also examines the impact on the likelihood of working in the best corresponding or an equivalent occupation for immigrant paid workers educated abroad and in Canada, and this, after having progressively added each of these various factors.

Sex and age group

Results from Table 4.9 show that female paid workers were 23% less likely than their male counterparts to report a good education-job skills match in 2006. Differences were also apparent, but of smaller magnitude, by age, with paid workers aged 55 to 64 being less likely than younger paid workers to be working in the best corresponding or an equivalent occupation. On the other hand, paid workers in the prime-working age group of 35 to 54 were generally more likely than younger and older paid workers to have a good education-job skills match.

Table 4.9 (Model 4.3)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64, Canada, 2006

Effect	Paid workers
	odds ratio
Sex	
Male[1]	**1.00**
Female	0.77***
Age group	
25 to 34[1]	**1.00**
35 to 44	1.04***
45 to 54	1.06***
55 to 64	0.95***

*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 4.3: After controlling for immigrant status, period of landing, region of education, sex and age group.

Controlling for sex and age group did not have much influence on the likelihood of working in the best corresponding or in an equivalent occupation for internationally-educated immigrants in general. As shown in Appendix 5, the highest variations were observed among very-recent and recent immigrants with credentials from countries in North America, Western Europe and Northern Europe, with decreases in the likelihood of having a good education-job skills match varying from 3 to 6 percentage points, respectively. Among immigrant paid workers established in the country for more than ten years, variations of less than 3 percentage points were observed for all regions of education (including Canada) (Table A.5.1 (columns 1 and 2), Appendix 5).

Such small variations in the likelihood of having a good education-job skills match when controlling for sex and age group are not surprising since the distribution of immigrant paid workers according to such variables was relatively similar to that observed for the population of paid workers in general (Table 4.1).

Marital status and presence of children

Being married or living in a common-law relationship seems to have a positive influence on the likelihood of having a good education-job skills match. In fact, as shown in Table 4.10, paid workers in the core working-age of 25 to 64 who reported being never married or in a common-law relationship, separated, divorced or widowed were all less likely than those being married or living in a common-law relationship to be working in the best corresponding or an equivalent

occupation in 2006, with odds ratios ranging from 0.73 for those who reported being widowed, never married or in a common-law relationship to 0.79 for those who reported being divorced.

Table 4.10 (Model 4.4)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64, Canada, 2006

Effect	Paid workers
	odds ratio
Marital status	
Married or in a common-law relationship[1]	**1.00**
Divorced	0.79***
Separated	0.76***
Never married or in a common-law relationship	0.73***
Widowed	0.73***
Presence of children	
No children[1]	**1.00**
Pre-school children	1.09***
Older children	0.98***

*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 4.4: After controlling for immigrant status, period of landing, region of education, sex, age group, marital status and presence of children.

The presence of pre-school children also seems to increase the likelihood of paid workers having a good education-job skills match. As shown in Table 4.10, paid workers with pre-school children (aged 5 and under) were more likely than those with or without older children (over 5 years of age) to report working in their field of study or in an equivalent occupation. There are some arguments in favour of an existing link between the number of children and the outcome of individuals in the labour market. As mentioned by Fertig and Schurer (2007), the presence of children could motivate a family father to become more ambitious in his career. According to a study by the Organisation for Economic Co-operation and Development (OECD) in 2002, the impact of parenthood on employment rates works in opposite directions for women and men: while women's work rates generally decrease, men's increase, in line with the traditional model of specialisation of gender roles within the household.

Compared to sex and age group, controlling for the marital status and the presence of children has a slightly stronger impact on the likelihood of working in the best corresponding or in an equivalent occupation for internationally-educated immigrants in general, with variations in the odds ratios ranging from 0 to 5 percentage points (Table A.5.1 (columns 2 and 3), Appendix 5).

In the case of immigrant paid workers educated in Canada, the odds ratios remained stable at 0.92 for those established in the country for more than ten years and decreased by slightly less than 1 percentage point to 0.71 for those established in the country for five years or less (very-recent immigrants). Variations were not statistically significant for Canadian-educated immigrant paid workers established in Canada from six to ten years (recent immigrants) (Table A.5.1 (columns 2 and 3), Appendix 5).

Such results are not surprising considering that, compared to Canadian-educated immigrants and the Canadian-born with a postsecondary education, a slightly higher proportion of internationally-educated immigrants aged 25 to 64 reported living in a married or common-law family with children in 2006 (Plante 2010). Removing the effect of those two variables from the results obtained in the previous model led to a decrease in the likelihood of having a good education-job skills match for these internationally-educated immigrant paid workers. Similarly, considering the greater similarity in the type of family arrangement between the Canadian-born with a postsecondary education and immigrants educated in Canada, it is not surprising to see almost no variation from the previous model when controlling for those two variables.

Level of education and major instructional programs

Paid workers who completed their education at the university level were more likely than those who completed their education at another postsecondary level of schooling (college, CEGEP or other non-university level and apprenticeship or trades) to report working in their field of study or in an equivalent occupation (Table 4.11). In fact, the analysis shows that paid workers with university degrees were 34% more likely than their counterparts who completed their education at the college level to report a good education-job skills match. In turn, paid workers with a certificate or diploma from apprenticeship or trade programs were about 33% less likely than paid workers with a certificate or diploma from the college level to report such a positive employment outcome. This situation may require attention in an economic context with shortages of personnel in the trades.

Table 4.11 (Model 4.5)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64, Canada, 2006

Effect	Paid workers
	odds ratio
Level of education	
College, CEGEP or other non-university[1]	**1.00**
University	1.34***
Apprenticeship or trades	0.67***
Major instructional program	
Business, finance and administration[1]	**1.00**
Natural and applied sciences	1.09***
Health	2.94***
Social science, education, government service and religion	1.22***
Art, culture, recreation and sport	1.08***
Sales and service	0.91***
Trades, transport and equipment operators	1.94***

*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 4.5: After controlling for immigrant status, period of landing, region of education, sex, age group, marital status, presence of children, level of education and major instructional program.

Results from the 2006 Census also showed that paid workers who studied in programs where there was a clear relationship between educational credentials and the ability to meet the requirements to work — such as for most regulated occupations and trades — generally had a higher likelihood of having a good education-job skills match than those who had studied in a field for which this relationship was not as clear (Table 4.11). Paid workers who graduated from instructional programs leading to health occupations (i.e., mostly regulated occupations) were, in fact, almost two times (194%) more likely than those with credentials in business, finance and administration to be working in their field of study or equivalent occupations. This was followed by paid workers with credentials leading to occupations in trades, transport and equipment operators and related occupations (+94%); in social science, education, government service and religion (+22%); in natural and applied sciences and related occupations (+9%); and in occupations in art, culture, recreation and sport (+8%). Paid workers with credentials leading to sales and service occupations were, on the other hand, 9% less likely than their counterparts with credentials in business, finance and administration to have a good education-job skills match.

Similar results have been reported in other studies. As noted by Boudarbat and Chernoff (2009), for example, graduates from occupation-specific programs overall have a much higher degree of match than those of graduates from more general programs. This is attributable to the fact that such programs provide specific skills meant for the job market.

Controlling for level of education and major instructional program seemed to have a relatively large impact on the likelihood of working in the best corresponding or in an equivalent occupation for internationally-educated immigrant paid workers, especially for those established in the country for ten years or less (very-recent and recent immigrants) (Table A.5.1 (columns 3 and 4), Appendix 5). These results are not surprising considering the higher proportion of university degree-holders within this population compared to their counterparts established in Canada for more than ten years, Canadian-educated immigrants and the Canadian-born with a postsecondary education.

Higher variations in the likelihood of having a good education-job skills match were also observed among immigrants with credentials from specific regions. As shown in Appendix 5, this was particularly true for immigrants with credentials from North America, some regions of Europe and Oceania. This may be attributable to the higher number of university-degree holders coming from these countries compared to those from other regions of the globe (Table A.5.1 (columns 3 and 4), Appendix 5).

In the case of immigrant paid workers educated in Canada, the likelihood of having a good education-job skills match dropped by slightly less than 1 percentage point to 0.91 for immigrants established in the country for more than ten years, and decreased by about 3 percentage points to 0.68 for very-recent immigrants, once controlling for education level and major instructional program. The impact was not statistically significant for Canadian-educated immigrant paid workers established in Canada from six to ten years (Table A.5.1 (columns 3 and 4), Appendix 5).

Province, territory and area of residence

As shown in Table 4.12, paid workers in Alberta (+7%) and the territories (+19%) were more likely than their counterparts in Ontario and the other provinces to report working in the best corresponding or an equivalent occupation in 2006. The higher likelihood shown by paid worker in the territories may be explained by the introduction of programs helping northern graduates find work related to their field of study. Through its *Northern Graduate Employment Program*, for example, the Government of the Northwest Territories has committed to helping northern graduates from recognized postsecondary nursing and social work programs find work experience related to their field of study. In addition to gaining valuable experience in their field of study, these programs offer a competitive salary, benefits and opportunities for advancement. A strong labour market for some provinces in 2006 may also help explain results obtained by paid workers living in Alberta.

In contrast, paid workers in the Atlantic Provinces showed the lowest likelihood of having a good education-job skills match among all provinces and territories in Canada. This was followed by paid workers in Quebec, Saskatchewan, British Columbia and Manitoba.

Finally, paid workers living in population centres were more likely than paid workers in rural areas to report having a good education-job skills match (Table 4.12). This may be attributable to the economic opportunities offered in these areas compared to rural areas (Statistics Canada 2007). Population centres, especially those consisting of a population of 100,000 and over (i.e., large urban population centres), have the ability to offer more job opportunities and a greater variety of jobs than smaller centres.

Table 4.12 (Model 4.6)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64, Canada, 2006

Effect	Paid workers
	odds ratio
Province and territory of residence	
Ontario[1]	**1.00**
Atlantic provinces	0.84***
Quebec	0.91***
Manitoba	0.96**
Saskatchewan	0.92***
Alberta	1.07***
British Columbia	0.95***
Territories	1.19***
Area of residence	
Population centre[1]	**1.00**
Rural area	0.88***

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 4.6: After controlling for immigrant status, period of landing, region of education, sex, age group, marital status, presence of children, level of education, major instructional program, province, territory and area of residence.

Controlling for location of residence (i.e., province, territory, population centre and rural area) also had a relatively large impact on the likelihood of working in the best corresponding or in an equivalent occupation for internationally-educated immigrant paid workers (Table A.5.1 (columns 4 and 5), Appendix 5). These results are not surprising considering that, compared to the population of paid workers in general, a higher proportion of internationally-educated immigrants reported living in Ontario (57% vs. 38%) or in population centres (96% vs. 83%) (Table 4.3).

Ability to conduct a conversation in Canada's official languages

The analysis finds that, compared to the knowledge of English only, being able to converse in both official languages increases the likelihood of working in the best corresponding or an equivalent occupation. As shown in Table 4.13, paid workers who reported being able to conduct a conversation in both English and French were about 21% more likely than their counterparts who reported speaking English only, to have a good education-job skills match. Conversely, paid workers who reported not being able to converse in at least one of Canada's official languages were about 41% less likely than those speaking English only to report working in their field of study or in an equivalent occupation. Paid workers who reported speaking French only were about 5% less likely than those speaking English only to report a good education-job skills match.

Table 4.13 (Model 4.7)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64, Canada, 2006

Effect	Paid workers
	odds ratio
Language ability status	
English only[1]	**1.00**
French only	0.95***
Both English and French	1.21***
Neither English nor French	0.59***

*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 4.7: After controlling for immigrant status, period of landing, region of education, sex, age group, marital status, presence of children, level of education, major instructional program, province, territory, area of residence and language ability status.

Controlling for language ability did not, in general, have a significant impact on the likelihood, for internationally-educated immigrants, to be working in the best corresponding or an equivalent occupation (Table A.5.1 (columns 5 and 6), Appendix 5). These results are not surprising considering that, similar to what was observed for paid workers in general, the majority of internationally-educated immigrants reported being able to conduct a conversation in one of Canada's official languages, with the bulk of them reporting (84%) English only (Table 4.4).

Immigrants with foreign credentials from Western Europe, Africa, West Central Asia and the Middle East showed a slight decrease in the likelihood of having a good education-job skills match after controlling for language ability. This may be attributable to the higher proportion of French-speaking immigrants within these regions (e.g., France, Belgium and Lebanon). With a 2 percentage-points increase, immigrants with credentials from Eastern Asia showed, on the other hand, the largest improvement among all internationally-educated immigrants after controlling for language ability (Table A.5.1 (columns 5 and 6), Appendix 5). Again, this may be attributable to the higher proportion of immigrants reporting not being able to conduct a conversation in either one of the official languages within this region compared to other regions.

Visible minority status

The analysis finds that being a member of a visible minority group decreased the likelihood of working in the best corresponding or an equivalent occupation. As shown in Table 4.14, paid workers who reported being a member of a visible minority group were 28% less likely than those who were not to report a good education-job skills match.

Table 4.14 (Model 4.8)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64, Canada, 2006

Effect	Paid workers
	odds ratio
Visible minority status	
Not member of a visible minority group[1]	**1.00**
Member of a visible minority group	0.72***

*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 4.8: After controlling for immigrant status, period of landing, region of education, sex, age group, marital status, presence of children, level of education, major instructional program, province, territory, area of residence, language ability status and visible minority status.

The analysis finds that controlling for visible minority status had a significant impact on the likelihood that immigrants (either educated in Canada or abroad) would be working in the best corresponding or an equivalent occupation. Immigrants with credentials from Canada, North America, Africa and Eastern Asia showed the highest increases in percentage points in the likelihood of reporting a good education-job skills match, once controlling for visible minority status. This was followed closely by immigrants educated in Latin America, Northern Europe, West Central Asia and the Middle East, and in Southern Asia. Variations of less than 1 percentage point were observed for immigrants with credentials from Eastern and Southern Europe (Table A.5.1 (columns 6 and 7), Appendix 5).

Full/part-time and full/part-year status of employment

Finally, the full/part-time and full/part-year status of employment also had an influence on the likelihood of working in the best corresponding or an equivalent occupation. Paid workers who reported working full-time for the full year were 119% more likely than their counterparts working part-time for only part of the year to report a good education-job skills match. This was followed by paid workers who reported being employed full-time for part of the year (+52%) and by those who reported being employed part-time, but for the full year (+9%) (Table 4.15).

Table 4.15 (Model 4.3)
Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64, Canada, 2006

	Paid workers
Effect	Odds ratio
Full/part-time and full/part-year status of employment	
Employed part-time, for part of the year	1.09
Employed part-time, for the full year	1.88***
Employed full-time, for part of the year	1.52***
Employed full-time, for the full year	2.19***

*** $p < 0.001$

1 Reference category.

Notes: Includes paid workers aged 25 to 56 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 4.3: After controlling for immigrant status, period of landing, region of education, sex, age group, marital status, presence of children, level of education, major instructional program, province, territory, area of residence, language ability status, visible minority status, and full/part-time and full/part-year status of employment.

Similar to what was observed for visible minority status, controlling for the full/part-time and full/part-year status of employment had a significant impact on the likelihood that immigrants (either educated in Canada or abroad) would be working in the best corresponding or an equivalent occupation. The highest variations in the likelihood of reporting a good education-job skills match were observed among very-recent immigrants. These results are not surprising considering that, compared to immigrants established in the country for a longer period of time, a higher proportion of very-recent immigrants reported working on a part-time basis. Variations of more than 5 percentage-points were observed for very-recent immigrants with credentials from Canada, North America, and Western and Northern Europe. The impact was not statistically significant for very-recent immigrants educated in Oceania (Table A.5.1 (columns 7 and 8), Appendix 5).

Summary

This section examined the characteristics and determinants associated with the likelihood of being employed in an occupation related to the field of study or in an occupation requiring similar or higher skill levels among paid workers aged 25 to 64 not attending school in 2006 and with credentials leading to the targeted occupations as identified by the FCR Program at HRSDC. As shown by analysis of data from the 2006 Census, internationally-educated immigrants were generally

less likely than their Canadian-educated counterparts and the Canadian-born with a postsecondary education to be employed in such occupations.

Regions from which credentials were obtained had a clear impact on the likelihood of being employed in associated or equivalent occupations for these paid workers. Other than for immigrants with credentials from countries in Northern Europe, immigrants who completed their highest level of postsecondary education in all other regions outside Canada were less likely than paid workers born in Canada to be working in their field of study or in an equivalent occupation.

Time elapsed since landing also figured among the characteristics and determinants more closely associated with integration of internationally-educated immigrants in the Canadian labour market. Those established in the country for more than ten years were generally more likely than their recent and very recent counterparts to be working in the best corresponding or an equivalent occupation. Factors noted in the literature that help to explain this finding include the discounting in the Canadian labour market of skills developed abroad and recognition that new immigrants, especially those arriving without pre-arranged employment, face a period of cultural and economic adjustment.

This being said, it is also important to note that the likelihood of being employed in the corresponding field or in an equivalent occupation may not be entirely attributed to the effect of 'time elapsed since landing' but includes a range of other factors as well. These include differences in the characteristics of immigrants who landed during different time periods, labour market conditions, as well as other factors such as language skills, lack of Canadian work experience, strength of social networks, knowledge of the Canadian labour market, difference in the quality of education, and barriers to recognition of international credentials and work experience.

Not surprisingly, paid workers who studied in programs where there was a clear relationship between educational credentials and the ability to meet the requirements to work — such as for most regulated occupations and trades — generally had a higher likelihood of having a good education-job skills match than those who had studied in a field for which this relationship was not as clear.

At the provincial and territorial level, paid workers in Alberta and the territories were more likely than their counterparts in Ontario and the other provinces to report working in the best corresponding or an equivalent occupation, whereas paid workers from the Atlantic Provinces and Quebec showed the lowest probabilities.

Results also showed that compared to the knowledge of English only, being able to converse in both official languages increases the likelihood of working in the best corresponding or an equivalent occupation. Conversely, paid workers who reported not being able to converse in at least one of Canada's official languages and those speaking French only were less likely than those speaking English only to report a good education-job skills match.

Finally, the analysis found that being male, being aged 35 to 54, living in a married or common-law relationship, having pre-school children, living in population centres, not being part of a visible minority group and the fact of working on a full-time full year basis all have a positive influence on the likelihood of having a good education-job skills match.

Section 5

Employment outcome #2 – Education-employment earnings match

Unlike the waves of immigrants who arrived in the 1950s and 1960s, those arriving in Canada since the 1970s have possessed relatively high educational levels. Upon their arrival, however, many immigrants, especially those educated abroad, initially face difficulties finding employment as well as locating jobs that pay relatively high wages. In fact, as per a report by Plante (2010), about three-quarters of internationally-educated immigrants in the core working-age group of 25 to 64 reported being employed in 2006. This was lower than the employment rates recorded by their counterparts educated in Canada and by the Canadian-born with a postsecondary education, both at 82%, respectively.

About six in ten internationally-educated immigrant paid workers reported working on a full-time full-year basis in 2005

As shown in Table 5.1, of the 617,930 internationally-educated immigrant paid workers aged 25 to 64 in 2006, about 60% (or 372,245) reported doing so on a full-time full-year basis in 2005 (i.e., working for pay 49 to 52 weeks, for 30 hours or more per week). This compares to about 70% of their Canadian-educated counterparts (67%) and Canadian-born paid workers with a postsecondary education (69%).

Table 5.1

Full/part-time and full/part-year status of employment of paid workers aged 25 to 64 with a postsecondary education by immigrant status, location of study and period of landing, Canada, 2005

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very recent	Recent	Established
	number					
Total	[illegible]	[illegible]	617,930	[illegible]	[illegible]	[illegible]
Full/part-time and full/part-year status of employment						
Part-time part-year	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Part-time full-year	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Full-time part-year	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Full-time full-year	[illegible]	[illegible]	372,245	[illegible]	[illegible]	[illegible]

Note: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

Less than half of very-recent immigrant paid workers reported working on a full-time full-year basis compared to about two-thirds for their counterparts established in the country for more than five years

Analysis of data from the 2006 Census shows that the longer an immigrant has been in Canada, the more likely he or she is to report being employed full-time, for the full year. As shown in Table 5.1, while about 46% of very-recent internationally-educated immigrant paid workers reported full-time full-year employment in 2005, this was the case for 64% of recent immigrants. At 66%, established immigrants were only slightly less likely than Canadian-educated immigrant paid workers (67%) and Canadian-born paid workers with a postsecondary education (69%) to report being employed full-time, for the full year in 2005. As noted previously, having spent a longer period of time in Canada has likely provided established immigrants with the tools and Canadian work experience that assist in improving their chances of securing employment.[5]

Full-time full-year internationally-educated immigrant paid workers generally earned less than their counterparts educated in Canada and Canadian-born paid workers with a postsecondary education

However, even when working the same number of hours for the same number of weeks, internationally-educated immigrant paid workers generally earned less than their counterparts educated in Canada and Canadian-born paid workers with a postsecondary education. Overall, as shown in Table 5.2, full-time full-year internationally-educated immigrant paid workers had median earnings of $44,600, compared to median earnings of $52,900 reported by their immigrant counterparts educated in Canada and $52,500 reported by full-time full-year Canadian-born paid workers with a postsecondary education.

> **Employment earnings:** Refers to the income received by persons aged 25 to 64 during calendar year 2005 as wages, salaries, tips or commissions.
>
> **Median earnings:** Median earnings are earnings levels that divide the population into two halves, i.e., half of the population receiving less than this amount, and half more. The median provides a more accurate measure of income since the average can be heavily skewed by a few very high income earners.
>
> Individuals with no earnings from employment are excluded from the calculation.

Table 5.2
Median employment earnings of paid workers aged 25 to 64 with a postsecondary education by immigrant status, location of study and period of landing, Canada, 2005

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	median earnings ($)					
All paid workers	[illegible]	[illegible]	[illegible]	[illegible]	35,811	41,465
Full-time full-year paid workers	52,500	52,912	44,610	[illegible]	43,920	48,848

Note: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

These results seem to support the argument that "the low earnings of immigrants are often attributed to the specificity of human capital to the country from which it originates, the argument being that skills generated through education or work experience in the source country cannot be directly transferred to the host country, resulting in apparently well-qualified immigrants holding low-paying jobs" (Statistics Canada 2008c). Another argument is that "it is not the 'specificity' of one's education or work experience that is the problem, but that appropriate systems are not currently in place to accurately and adequately recognize the skills they impart."

Language barriers and both real and perceived discrimination may also represent some of the factors influencing the earnings of immigrants compared to those of the Canadian-born with a postsecondary education (Picot and Hou 2009). Oreopoulos (2008) found, for example, that job applicants with English-sounding names and Canadian experience were much more likely to be called for an interview (all other job and personal characteristics identical) than those with Asian-sounding names and foreign experience. But whether this points to discrimination or to employers' concerns regarding language ability among immigrants and other traits is not known (Picot and Hou 2009).

Earning gaps between internationally-educated immigrants and Canadian-born paid workers decreased with time elapsed since landing in Canada

As observed previously, there is an association between the length of time spent in Canada and earnings of immigrants. Analysis of the International Adult Literacy Survey data by Bonikowska, Green and Riddell (2008) indicates that returns in the Canadian labour market to foreign work experience are very low, and quite possibly, zero. They argue that it is work experience in Canada that counts toward earnings growth. When only their Canadian work experience is taken into account, immigrants' earnings are more similar to those of the Canadian-born with the same years of experience.

In fact, as shown in Table 5.3, earning gaps between internationally-educated immigrants and Canadian-born paid workers decreased with time elapsed since landing in Canada. Results from the 2006 Census show that full-time full-year very-recent immigrants aged 25 to 64 earned, on average, 68 cents for each dollar received by Canadian-born paid workers with a postsecondary education in 2005. This compares to about 84 cents on the dollar for recent immigrants and to 93 cents on the dollar for immigrants established in the country for more than ten years.

Table 5.3

Median employment earnings ratio of full-time full-year paid workers by immigrant status, location of study and period of landing, Canada, 2005

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
Median earnings ($)	**52,500**	**52,912**	**44,610**	**35,814**	**43,920**	**48,848**
Ratio	100.0	100.8	85.0	68.2	83.7	93.0

Note: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

Again, as noted earlier, the decrease in the size of these earning gaps may not be entirely attributable to the effect of 'time elapsed since landing' since compositional change of immigrants who landed during different periods, labour market conditions as well as other factors may also contribute to differences across groups.

Another part of the explanation lies in differences in skill levels, especially between internationally-educated immigrants and those who received some or all of their education in Canada (Bonikowska, Green and Riddell 2008). In fact, at $52,900 in 2005, the median earnings of full-time full-year Canadian-educated immigrant paid workers were substantially higher than the median earnings of their counterparts educated abroad ($44,600) and matched those of full-time full-year Canadian-born paid workers with a postsecondary education in 2005 ($52,500) (Table 5.3).

5.1 Profile of full-time full-year internationally-educated immigrant paid workers

As shown by the 2006 Census, there were about 372,240 full-time full-year internationally-educated immigrant paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations as identified by the FCR Program at HRSDC. This represents 61% of the 617,930 internationally-educated immigrant working population analysed in Section 4.

Socio-demographic characteristics and area of residence

Compared to the overall internationally-educated immigrant working population in 2006, a slightly higher proportion of those working on a full-time full-year basis reported being established in the country for more than five years (79% vs. 73%) and being men (63% vs. 57%) (Tables 4.1 and 5.4). About the same proportions of each group reported being in the prime-working age group of 35 to 54 (67% vs. 65%), being married or living in a common-law relationship (83% vs. 83%), living in the three most populated provinces (87% vs. 86%) and in population centres (96% vs. 96%) (Tables 4.1, 4.3 and 5.4).

Table 5.4

Socio-demographic characteristics of full-time full-year paid workers aged 25 to 64 with a postsecondary education by immigrant status, location of study and period of landing, Canada, 2006

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Total	**2,562,965**	**385,725**	**372,240**	**78,075**	**88,310**	**205,855**
Sex						
Women	1,134,255	158,725	139,530	26,480	31,485	81,565
Men	1,428,710	227,000	232,715	51,600	56,825	124,290
Age group						
25 to 34	618,185	82,335	44,670	26,375	13,685	4,605
35 to 44	811,750	123,875	125,630	36,035	44,550	45,040
45 to 54	809,270	111,085	122,410	13,575	25,550	83,285
55 to 64	323,755	68,425	79,535	2,095	4,520	72,925
Marital status						
Divorced	259,200	32,860	23,325	2,770	4,195	16,365
Married or in a common-law relationship	1,773,775	271,065	308,415	65,980	75,820	166,615
Separated	89,255	13,445	10,950	1,665	2,235	7,045
Never married or in a common-law relationship	416,890	64,590	25,530	7,285	5,585	12,655
Widowed	23,840	3,765	4,025	380	475	3,175
Province of residence						
Atlantic provinces	234,515	6,505	3,950	740	710	2,500
Quebec	721,310	49,405	41,270	10,930	8,645	21,690
Ontario	872,610	219,920	220,750	44,835	54,695	121,225
Manitoba	89,765	9,460	7,935	2,005	1,425	4,510
Saskatchewan	83,820	3,205	2,490	515	430	1,545
Alberta	294,225	38,745	34,780	7,970	7,265	19,545
British Columbia	257,800	57,920	60,555	10,940	15,045	34,570
Territories	8,925	565	515	140	90	275
Area of residence						
Rural area	501,980	23,515	15,700	2,200	2,225	11,270
Population centre	2,060,985	362,210	356,545	75,880	86,085	194,585

Note: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

Level of education and major instructional programs

Not surprisingly, internationally-educated immigrants who reported working on a full-time full-year basis were as likely as the overall internationally-educated immigrant paid workers (70% vs. 70%) to report having completed their education at the university-level in 2006 (Tables 4.2 and 5.5). The top regions from which they received their highest level of education were very similar to the regions from which they immigrated: Eastern Europe (14%), Southeast Asia (14%), Southern Asia (13%), Eastern Asia (12%), and Northern Europe (12%) (see Appendix 1 for the list of countries corresponding to these regions of study) (Table 5.5).

Table 5.5

Educational characteristics of full-time full-year paid workers aged 25 to 64 with a postsecondary education by immigrant status, location of study and period of landing, Canada, 2006

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Total	**2,562,965**	**385,725**	**372,240**	**78,075**	**88,310**	**205,855**
Highest level of education						
University	1,074,250	195,910	259,235	65,255	71,615	122,365
College, CEGEP or other non-university	956,705	131,050	75,975	9,335	11,870	54,770
Apprenticeship or trades	532,015	58,760	37,035	3,490	4,820	28,720
Region where highest level of education was obtained						
Canada	2,522,010	385,725	...	...	...	...
North America	29,520	...	27,225	4,565	5,090	17,570
Latin America	365	...	25,630	5,940	4,370	15,315
Western Europe	2,050	...	21,640	4,470	4,495	12,670
Eastern Europe	60	...	52,135	10,060	13,500	28,570
Northern Europe	5,815	...	43,155	4,385	4,770	33,995
Southern Europe	370	...	18,330	1,600	4,205	12,525
Africa	235	...	20,435	5,145	4,770	10,520
West Central Asia and the Middle East	390	...	16,220	3,940	4,770	7,510
Eastern Asia	230	...	45,390	12,710	16,640	16,045
Southeast Asia	55	...	50,320	10,105	9,845	30,370
Southern Asia	75	...	46,895	14,020	14,980	17,895
Oceania	1,780	...	4,865	1,125	875	2,870
Major instructional program						
Business, finance and administration	708,910	103,855	85,045	17,615	18,535	48,890
Natural and applied sciences	588,645	126,985	164,615	41,705	48,205	74,700
Health	254,245	34,235	31,970	5,515	5,795	20,660
Social science, education, government service and religion	460,875	53,625	44,385	7,935	8,935	27,510
Art, culture, recreation and sport	64,310	11,210	8,840	1,935	1,985	4,915
Sales and service	101,720	14,375	8,790	1,005	1,345	6,440
Trades, transport and equipment operators	384,270	41,435	28,610	2,360	3,505	22,735

... not applicable

Note: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

Similar to all internationally-educated immigrant paid workers, about 44% of their counterparts working on a full-time full-year basis were found in instructional programs leading to occupations in natural and applied sciences such as engineers, engineering technicians and architects, followed by those leading to occupations in business, finance and administration (23%), occupations in social science, education, government service and religion (12%) and in health occupations (9%). About 8% reported postsecondary credentials leading to trades, transport and equipment operators and related occupations, while the remaining 4% were distributed almost evenly between occupations in art, culture, recreation and sport and those related to sales and service (Tables 4.2 and 5.5).

Linguistic portrait and ethnocultural diversity

Similar to what was observed for all internationally-educated immigrant paid workers aged 25 to 64, almost all of those who reported working full-time for the full year reported being able to conduct a conversation in one of Canada's two official languages: more than eight in ten (85%) reported the knowledge of English only, followed by knowledge of both English and French (12%) and knowledge of French only (2%). Only a small proportion (slightly less than 1%) reported not being able to conduct a conversation in either English or French. Furthermore, about the same proportions reported being part of a visible minority group (59% for full-time full-year paid workers vs. 61% for the overall immigrant population paid workers) (Tables 4.4, 4.5 and 5.6).

Table 5.6

Ethnocultural and linguistic profile of full-time full-year paid workers aged 25 to 64 with a postsecondary education, by immigrant status, location of study and period of landing, Canada, 2006

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Total	**2,562,965**	**385,725**	**372,240**	**78,075**	**88,310**	**205,855**
Ability to conduct a conversation in one of Canada's official languages						
English only	1,589,440	308,545	315,480	64,465	76,475	174,540
French only	323,385	6,770	7,855	2,240	1,780	3,835
Both English and French	649,680	69,745	45,480	10,150	9,100	26,240
Neither English nor French	460	660	3,425	1,225	960	1,240
Member of a visible minority group						
Member of a visible minority group	65,825	207,245	217,885	52,440	58,620	106,820
Not a member of a visible minority group	2,436,980	178,070	154,200	25,575	29,670	98,955
Aboriginal self-reporting	60,155	405	165	65	15	85

Note: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

5.2 The many factors leading to a good education-employment earnings match

As mentioned earlier, the 'successful' integration of internationally-educated immigrants can be measured in different ways. The following section examines the extent to which internationally-educated immigrants who reported working full-time for the full-year in 2005 reported employment earnings at or above the national median earnings calculated for the occupation corresponding best to their highest postsecondary credential.

Logistic regression model

In the logistic regression model used for Employment outcome #2, the dependent variable takes the value of 1 if a full-time full-year paid worker has employment earnings at or above the national median earnings calculated for the occupation corresponding best to their highest postsecondary credential. The dependent variable takes the value of 0 otherwise.

As reported in the Data and methodology section, the logistic regression analysis first considers the contribution of 'given' characteristics to the probability of having a good education-employment earnings match: immigrant status by period of landing and region of education.

The sex and age group, marital status and presence of children, level of education and major instructional program, province, territory and area of residence, the language ability status variable and the visible minority status variable are then added progressively in order to assess both their independent effects and whether they modify the effects of previously-added variables.

The logic behind this approach is that immigrants possess certain 'given' characteristics (i.e., they either completed their highest level of education in Canada or abroad, and they landed in Canada during different time period). Their likelihood of having a good education-employment earnings match can then be influenced by various socio-demographic and educational characteristics, their province, territory and area of residence, as well as by their language ability in one of the two official languages and their belonging to a visible minority group.

Results

Analysis of data from the 2006 Census shows that, among the 372,240 full-time full-year internationally-educated immigrant paid workers who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC in 2006, slightly more than half (54%) reported working in their trained occupation or in an occupation requiring similar or higher skill levels. This is slightly higher than the proportion of 48% observed for all internationally-educated immigrant paid workers in 2006 (Table 4.6). Results from Table 5.7 show that this proportion increased to 71% for their Canadian-educated counterparts and to 73% for the full-time full-year Canadian-born paid workers with a postsecondary education (Table 5.7).

Table 5.7

Education-job skills matching status of full time-full-year paid workers aged 25 to 64 with a postsecondary education by immigrant status, location of study and period of landing, Canada, 2006

	Canadian-born	Canadian-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Total	**2,562,965**	**385,725**	**372,240**	**78,075**	**88,310**	**205,855**
Education-job skills matching status						
Working in the best or equivalent occupation	1,874,495	274,155	201,430	37,025	47,135	117,275
Working in occupations requiring lower skill levels	688,465	111,565	170,810	41,050	41,180	88,580

Note: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Source: 2006 Census of Population, Statistics Canada.

'Given' characteristics

The following section examines the extent to which full-time full-year internationally-educated immigrant paid workers who have a field of study that typically leads to a targeted occupation were actually having earnings at or above the median for the occupation corresponding best to their field of study. It then identifies the characteristics and determinants more closely associated with a 'successful' employment outcome in the Canadian labour market (i.e., region of education and time elapsed since landing).

Full-time full-year internationally-educated immigrant paid workers were less likely than full-time full-year Canadian-born paid workers to have earnings at or above the median for the occupation corresponding best to their field of study

Analysis of data from the 2006 Census shows that full-time full-year internationally-educated immigrant paid workers were generally less likely than the Canadian-born who reported working full-time for the full year to have earnings at or above the median for the occupation corresponding best to their field of study, with odds ratios ranging from 0.39 for those with credentials from countries in Southeast and Southern Asia to 0.70 when credentials were obtained from countries in Western Europe. The only exceptions to this were for full-time full-year immigrant paid workers educated in Northern Europe and Oceania, who were each 11% and 25% more likely than their counterparts born in Canada to report a good education-employment earnings match. Differences were not statistically significant for full-time full-year immigrant paid workers with credentials from North America and Canada (Table 5.8).

Table 5.8 (Model 5.1)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64, Canada, 2006

Effect	Full-time full-year paid workers
	odds ratio
Canadian-born with a postsecondary education[1]	**1.00**
Region of education of immigrants	
Canada	1.02
North America	1.07
Latin America	0.44***
Western Europe	0.70***
Eastern Europe	0.54***
Northern Europe	1.11***
Southern Europe	0.66***
Africa	0.67***
West Central Asia and the Middle East	0.40***
Eastern Asia	0.41***
Southeast Asia	0.39***
Southern Asia	0.39***
Oceania	1.25**

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category.

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.
Model 5.1: After controlling for immigrant status and region of education.

Time elapsed since landing

Similar to what was observed in the previous section for the education-job skills match, full-time full-year internationally-educated immigrant paid workers established in the country for more than ten years were generally more likely than their very-recent — and of most of their recent counterparts — to report a good education-employment earnings match (Table 5.9).

Table 5.9 (Model 5.2)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64, Canada, 2006

	Very-recent immigrants	Recent immigrants	Established immigrants
	Column 1	Column 2	Column 3
Effect		odds ratio	
Canadian-born with a postsecondary education[1]	**1.00**	**1.00**	**1.00**
Region of education of immigrants			
Canada	0.55***	0.55	1.06***
North America	0.86	0.86	1.16**
Latin America	0.27***	0.50**	0.49***
Western Europe	0.55***	0.74*	0.75**
Eastern Europe	0.28***	0.58***	0.61***
Northern Europe	0.87	0.87	1.15**
Southern Europe	0.28***	0.48*	0.78***
Africa	0.39***	0.71***	0.79***
West Central Asia and the Middle East	0.28***	0.47**	0.42*
Eastern Asia	0.23***	0.48***	0.49***
Southeast Asia	0.24***	0.24	0.48***
Southern Asia	0.28***	0.49***	0.40**
Educated in Oceania	1.51**	1.51	1.51

* $p \leq 0.05$

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category.

Notes: These odd ratios come from a single regression but the odd ratios are presented in separate columns to improve readability.

Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 5.2: After controlling for immigrat status, region of education and period of landing.

The analysis finds that the magnitude of that 'improvement over time' varies by region from which the highest postsecondary credentials were obtained. In fact, as shown in Table 5.9 (columns 1 and 3), full-time full-year immigrant paid workers with credentials from countries in Southern Europe and from Canada showed the highest 'improvement over time' with around 50 percentage-point difference in the likelihood of having a good education-employment earnings match between very-recent and established immigrants. This was followed by full-time full-year immigrant paid workers with credentials from Africa (40 percentage points), Eastern Europe (33 percentage points), Eastern Asia (26 percentage points), Southeast Asia (24 percentage points), Latin America (22 percentage points) and Western Europe (20 percentage points). Differences

of less than 15 percentage points were observed between full-time full-year very-recent and established immigrant paid workers with credentials from countries in West Central Asia and the Middle East and Southern Asia. Such comparisons between very-recent and established immigrants were not possible for full-time full-year immigrant paid workers with credentials from North America, Northern Europe and Oceania as some of the results were not statistically significant.

Even if difficulties in finding employment that pays relatively high wages seem to ease over time, full-time full-year internationally-educated immigrant paid workers established in the country for more than ten years were still generally less likely than their counterparts born in Canada to report earnings at or above the national median earnings calculated for the occupation corresponding best to their field of study, with odds ratios ranging from 0.40 for full-time full-year paid workers with credentials from countries in Southern Asia to 0.79 for those with credentials from countries in Africa (Table 5.9 (column 3)). The only exceptions to this were for those who reported receiving their highest level of education from countries in North America (+16%) and Northern Europe (+15%). In comparison, full-time full-year Canadian-educated immigrant paid workers established in the country for more than ten years were about 6% more likely than their counterparts born in Canada to report such a level of earnings.

Interestingly, immigrant paid workers who were the most likely to report a good education-employment earnings match were also the most likely to report working in their field or in an equivalent occupation. This was the case for those who reported credentials from Canada, North America, Western Europe, Northern Europe, and Southern Europe. At the other end of the spectrum, immigrant paid workers who were the least likely to report earnings at or above the national median earnings calculated for the occupation corresponding best to their field of study were also the least likely to report a good education-job skills match (Tables 4.8 and 5.9).

Socio-demographic characteristics

Sex and age group

Results from the 2006 Census showed that, in addition to being less likely to report a good education-job skills match (-23%) (Table 4.9), women were also less likely than their male counterparts to report a good education-employment earnings match (-14%) (Table 5.10).

Table 5.10 (Model 5.3)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64, Canada, 2006

Effect	Full-time full-year paid workers
	odds ratio
Sex	
Male[1]	**1.00**
Female	0.86***
Age group	
25 to 34[1]	**1.00**
35 to 44	1.54***
45 to 54	1.73***
55 to 64	1.59***

*** $p \leq 0.001$

1. Reference category.

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.
Model 5.3: After controlling for immigrant status, period of landing, region of education, sex and age group.

With respect to age, those in older age groups were, in general, more likely than their counterparts aged 25 to 34 to report earnings at or above the median for the occupation corresponding best to their field of study: +73% in the case of full-time full-year paid workers aged 45 to 54 and +54% in the case of those aged 34 to 44 (Table 5.10). In the case of paid workers aged 55 to 64, although results showed that they were 5% less likely than younger paid workers aged 25 to 34 to work in the best corresponding or in an equivalent occupation (Table 4.9), these full-time full-year paid workers were, on the other hand, 59% more likely than younger paid workers to have earnings at or above the median for the occupation corresponding best to their field of study (Table 5.10).

The analysis finds that controlling for sex and age group resulted in an increase in the likelihood of having a good education-employment earnings match for very-recent immigrants; however, the reverse was observed for their counterparts established in the country for a longer period of time (Table A.6.1 (columns 1 and 2), Appendix 6). These results are not surprising considering that, compared to their recent (16%) and established counterparts (2%), a much larger share of very-recent were aged 25 to 34 (34%). In comparison, about 12% of all full-time full-year paid workers in 2005 were in the younger age group of 25 to 34 (Table 5.4).

Lower variations in the share of full-time female paid workers could be observed among the different cohorts of internationally-educated immigrants, with proportions ranging from 34% for very-recent immigrants, to 36% for recent immigrants, and to 40% for those established in the country for more than ten years. In comparison, about 37% of all full-time full-year paid workers in 2005 were female (Table 5.4).

Marital status and presence of children

Similar to what was observed for the education-job skills match, being married or living in a common-law relationship seems to have a positive influence on the likelihood of having earnings at or above the median for the occupation corresponding best to their field of study. In fact, as shown in Table 5.11, full-time full-year paid workers in the core working age of 25 to 64 who reported being never married or in a common-law relationship, divorced, separated or widowed were all less likely than those being married or living in a common-law relationship to have a good education-employment earnings match, with odds ratio varying from 0.80 for those who reported being separated or widowed to 0.85 for those who reported being divorced.

Table 5.11 (Model 5.4)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64, Canada, 2006

	Full-time full-year paid workers
Effect	odds ratio
Marital status	
Married or in a common-law relationship[1]	**1.00**
Divorced	0.85***
Separated	0.80***
Never married or in a common-law relationship	0.83***
Widowed	0.80***
Presence of children	
No children[1]	**1.00**
Pre-school children	1.12***
Older children	1.01

*** $p \leq 0.001$

1. Reference category.

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the PDR Program at HRSDC.

Model 5.4: After controlling for immigrant status, period of landing, region of education, sex, age group, marital status and presence of children.

The presence of pre-school children also seems to increase the likelihood that full-time full-year paid workers will have a good education-employment earnings match. In fact, as shown in Table 5.11, paid workers with pre-school children (aged 5 and under) were 12% more likely than those without any children to report a good education-employment earnings match. Differences for full-time full-year paid workers with older children were not statistically significant.

Removing the effect of marital status and presence of children resulted in a slight decrease in the likelihood of reporting a good education-employment earnings match for internationally-educated immigrants (variations generally ranging from less than 1 to about 3 percentage points) (Table A.6.1 (columns 2 and 3), Appendix 6). As observed earlier, such results are not surprising considering that, compared to Canadian-educated immigrants and the Canadian-born with a postsecondary education, a slightly higher proportion of internationally-educated immigrants aged 25 to 64 reported living in a married or common-law family with children in 2006 (Plante 2010).

Similarly, considering the greater similarity in the type of family arrangement between the Canadian-born with a postsecondary education and immigrants educated in Canada, it is not surprising to see almost no variation from the previous model when controlling for those two variables (variation of less than 1 percentage point).

Level of education and major instructional programs

Full-time full-year paid workers who completed their education at the university level were more likely than those who completed their education at the college or apprenticeship and trades levels to report having a good education-employment earnings match (Table 5.12). In fact, the analysis finds that full-time full-year paid workers with university degrees were 261% more likely that their counterparts who completed their education at the college level to have earnings at or above the median for the occupation corresponding best to their field of study. Full-time full-year paid workers with a certificate or diploma from apprenticeship or trade programs were, on the other hand, about 16% less likely than paid workers with a certificate or diploma from a college to report such a positive employment outcome.

Table 5.12 (Model 5.5)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64, Canada, 2006

	Full-time full-year paid workers
Effect	*odds ratio*
Level of education	
College, CEGEP or other non-university[1]	1.00
University	3.61***
Apprenticeship or trades	0.84***
Major instructional program	
Business, finance and administration[1]	1.00
Natural and applied sciences	1.04**
Health	2.42***
Social science, education, government service and religion	1.43***
Art, culture, recreation and sport	1.02
Sales and service	3.60***
Trades, transport and equipment operators	4.13***

** $p < 0.01$

*** $p < 0.001$

1. Reference category.

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FOR Program at HRSDC.

Model 5.5: After controlling for immigrant status, period of landing, region of education, sex, age group, marital status, presence of children, level of education and major instructional program.

Similar to what was found in the previous section with regard to the education-job skills match, full-time full-year paid workers who studied in programs where there was a clear relationship between educational credentials and the ability to meet the requirements to work — such as for most regulated occupations and trades — generally had higher education-employment earnings match than those who had studied in a field of study for which this relationship was not as clear.

In fact, as shown in Table 5.12, full-time full-year paid workers who graduated from instructional programs leading to trades, transport and equipment operators and health occupations were, respectively, 51% and 147% more likely than those with credentials in business, finance and administration to have earnings at or above the median for the occupation corresponding best to their field of study. This was followed by full-time full-year paid workers with credentials leading to occupations in social sciences, education, government service and religion (+43%) and in natural and applied sciences (+4%).

In the case of full-time full-year paid workers with credentials leading to sales and service occupations, although the results show that they were about 9% less likely than those with credentials in business, finance and administration to have a good education-job skills match (Table 4.11), they were 260% more likely than those with credentials in business, finance and administration to have earnings at least equal to the median for occupations related to their field of study (Table 5.12). Differences for full-time full-year paid workers with credentials leading to occupations in art, culture, recreation and sport were not statistically significant.

Controlling for level of education and major instructional program had a relatively large influence on the likelihood of reporting a good education-employment earnings match (Table A.6.1 (columns 3 and 4), Appendix 6). These results are not surprising considering the higher proportion of university degree-holders within this population compared to the Canadian-born with a postsecondary education.

The largest decreases (more than 10 percentage points) in the likelihood of having a good education-employment earnings match, after controlling for the effects of education level and major instructional program were observed among recent immigrants with credentials from Eastern Europe, Africa, and West Central Asia and the Middle East, and established immigrants educated in Southeast Asia (Table A.6.1 (columns 3 and 4), Appendix 6).

In the case of full-time full-year immigrant paid workers educated in Canada, the likelihood of having a good education-employment earnings match dropped by about 2 percentage points to 1.01 for immigrants established in the country for more than ten years, and decreased by about 7 percentage points to 0.57 for very-recent immigrants. Differences were not statistically significant for full-time full-year Canadian-educated immigrant paid workers established in Canada from six to ten years (Table A.6.1 (columns 3 and 4), Appendix 6).

Province, territory and area of residence

As shown in Table 5.13, other than their counterparts in Alberta (+14%) and the territories (+18%), full-time full-year paid workers residing in all of the other provinces were less likely than those in Ontario to report earnings at or above the median for the occupation corresponding best to their field of study. Paid workers in Alberta and the territories were also more likely than those in Ontario to report working in the best corresponding or in an equivalent occupation (Table 4.12).

Compared to full-time full-year paid workers in Ontario, those living in the Atlantic Provinces (-41%) and Quebec (-40%) showed the lowest likelihood of having earnings at or above the median for the occupation corresponding best to their field of study (Table 5.13). This was followed by full-time full-year paid workers in Manitoba (-23%), Saskatchewan (-20%) and British Columbia (-14%).

Table 5.13 (Model 5.6)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64, Canada, 2006

Effect	Full-time full-year paid workers
	odds ratio
Province and territory of residence	
Ontario[1]	**1.00**
Atlantic provinces	0.59***
Quebec	0.60***
Manitoba	0.77***
Saskatchewan	0.80***
Alberta	1.14***
British Columbia	0.86***
Territories	1.18**
Area of residence	
Population centre[1]	**1.00**
Rural area	0.85***

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 5.6: After controlling for immigrant status, period of landing, region of education, sex, age group, marital status, presence of children, level of education, major instructional program, province, territory and area of residence.

Full-time full-year paid workers from rural areas were 15% less likely than those established in population centres to report a good education-employment earnings match (Table 5.13).

Controlling for location of residence (i.e., province, territory, population centre and rural area) resulted in a relatively large decrease in the likelihood of having earnings at or above the median for the occupation corresponding best to their field of study for internationally-educated immigrant paid workers (Table A.6.1 (columns 4 and 5), Appendix 6). These results are not surprising considering that, compared to the population of full-time full-year paid workers in general, a higher proportion of internationally-educated immigrants reported living in Ontario (59% vs. 40%) or in population centres (96% vs. 84%) (Table 5.4).

Ability to conduct a conversation in Canada's official languages

The likelihood of having earnings at or above the median for the occupation corresponding best to their field of study was highest for those with knowledge of English only compared to other language groups. In fact, similar to what was observed for the education-job skills match, full-time full-year paid workers who reported not being able to converse in at least one of Canada's official languages were about 45% less likely than those speaking English only to report having earnings at or above the median for the occupation corresponding best to their field of study, while those who reported speaking French only were about 22% less likely. Differences were not statistically significant for full-time full-year paid workers who reported being able to conduct a conversation in both English and French (Table 5.14).

Table 5.14 (Model 5.7)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64, Canada, 2006

	Full-time full-year paid workers
Effect	odds ratio
Language ability status	
English only[1]	**1.00**
French only	0.78***
Both English and French	1.01
Neither English nor French	0.55***

*** $p \leq 0.001$

1. Reference category.

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 5.7: After controlling for immigrant status, period of landing, region of education, sex, age group, marital status, presence of children, level of education, major instructional program, province, territory, area of residence and language ability status.

However, with a change of 1 percentage point or less, controlling for language ability did not have a significant impact on the likelihood of reporting earnings at or above the median for the occupation corresponding best to their field of study, for both full-time full-year Canadian- and internationally-educated immigrant paid workers (Table A.6.1 (columns 5 and 6), Appendix 6). These results are not surprising considering that, similar to what was observed for full-time full-year paid workers in general, the majority of immigrants reported being able to conduct a conversation in one of Canada's official languages, with the majority reporting English only (Table 5.6).

Visible minority status

Similar to what was observed for the education-job skills match, the analysis finds that being a member of a visible minority group decreased the likelihood of having earnings at or above the median for the occupation corresponding best to their field of study. As shown in Table 5.15, full-time full-year paid workers who reported being a member of a visible minority group were about 18% less likely than those who were not to have a good education-employment earnings match.

Table 5.15 (Model 5.8)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64, Canada, 2006

Effect	Full-time full-year paid workers
	odds ratio
Visible minority status	
Not member of a visible minority group[1]	**1.00**
Member of a visible minority group	0.82***

*** $p \leq 0.001$

1. Reference category.

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Model 5.8: After controlling for immigrant status, period of landing, region of education, sex, age group, marital status, presence of children, level of education, major instructional program, province, territory, area of residence, language ability status and visible minority status.

Controlling for visible minority status had a significant impact on the likelihood that full-time full-year immigrant paid workers (either educated in Canada or abroad) would report earnings at or above the median for the occupation corresponding best to their field of study. Full-time full-year immigrant paid workers with credentials from Canada, Africa and Asia showed the highest increases in the likelihood of reporting a good education-employment earnings match, once accounting for the impact of visible minority status. Conversely, controlling for visible minority status did not seem to have much impact on the likelihood of having earnings at or above the median for the occupation corresponding best to their field of study among full-time full-year immigrant paid workers with credentials from Eastern and Southern Europe (Table A.6.1 (columns 6 and 7), Appendix 6).

Summary

According to data from the 2006 Census, slightly more than half (54%) of the 372,240 full-time full-year internationally-educated immigrant paid workers not attending school who had a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC reported working in their trained occupation or in an occupation requiring similar or higher skill levels. This proportion was lower than in the case of their Canadian-educated counterparts (71%) and Canadian-born paid workers with a postsecondary education (73%).

Full-time full-year internationally-educated immigrant paid workers were generally less likely than the Canadian-born who reported working full-time for the full year to have earnings at or above the median for the occupation corresponding best to their field of study, with odds ratios ranging from 0.39 for those with credentials from countries in Southeast and Southern Asia to 0.70 when credentials were obtained from countries in Western Europe. The only exceptions to this were full-time full-year immigrant paid workers educated in Northern Europe and Oceania, who were each 11% and 25% more likely than their

counterparts born in Canada to report a good education-employment earnings match. Differences were not statistically significant for full-time full-year immigrant paid workers with credentials from North America and Canada.

Similar to what was observed in the previous section for the education-job skills match, full-time full-year internationally-educated immigrant paid workers established in the country for a longer period were generally more likely than their very-recent counterparts to report a good education-employment earnings match. Even if difficulties in finding employment that pays relatively high wages seem to ease over time, full-time full-year internationally-educated immigrant paid workers established in the country for more than ten years were still generally less likely than their counterparts born in Canada to report earnings at or above the national median earnings calculated for the occupation corresponding best to their field of study, with odds ratios varying from 0.40 for full-time full-year paid workers with credentials from countries in Southern Asia to 0.79 for those with credentials from countries in Africa. The only exceptions to this were for those who reported receiving their highest level of education from countries in North America (+16%) and Northern Europe (+15%). In comparison, full-time full-year Canadian-educated immigrant paid workers established in the country for more than ten years were about 6% more likely than their counterparts born in Canada to report such a level of earnings.

Those in older age groups were, in general, more likely than their counterparts aged 25 to 34 to report earnings at or above the median for the occupation corresponding best to their field of study: +73% in the case of full-time full-year paid workers aged 45 to 54, +59% in the case of those aged 55 to 64 and +54% for those aged 34 to 44.

Provincially, other than their counterparts residing in Alberta and the territories, full-time full-year paid workers residing in all of the other provinces were less likely than those in Ontario to report earnings at or above the median for the occupation corresponding best to their field of study. Those living in the Atlantic Provinces and Quebec showed the lowest likelihood of having earnings at or above the median for the occupation corresponding best to their field of study, followed by full-time full-year paid workers residing in Manitoba, Saskatchewan and British Columbia.

Similar to what was observed in the previous section with regard to the education-job skills match, the likelihood of having earnings at or above the median for the occupation corresponding best to their field of study was higher for immigrants having knowledge of English only, compared to those with other language profiles. This was also the case for full-time full-year paid workers who studied in programs where there was a clear relationship between educational credentials and the ability to meet the requirements to work. Being male, not being a member of a visible minority group, living in a married or common-law relationship, having pre-school children, and living in population centres also figured among the characteristics and determinants more closely associated with a 'positive' integration of full-time full-year paid workers in the Canadian labour market.

Section 6

Eight selected occupations

Given the current policy focus of the FCR Program at HRSDC on specific occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications* (see text box below), this section presents similar results as those produced in sections 4.2 and 5.2, but for these specific occupations.

The current report covers eight of the 14 specific occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*, mostly those from the first group (i.e., architects, engineers, financial auditors and accountants, medical laboratory technologists and pathologists' assistants, pharmacists, physiotherapists, registered nurses and licensed practical nurses). At the time of undertaking this study, these were the occupations that were identified as requiring more immediate attention.

Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications

To meet the needs of the 21st century economy, Canada requires a highly skilled work force. One of the keys to Canada's prosperity and competitiveness will be the degree to which internationally-educated paid workers are able to contribute to Canada's economic and social development (Human Resources and Skills Development Canada 2010).

New policy measures to improve the integration of internationally-educated paid workers from selected occupations in the Canadian labour market are currently being developed by the federal government and concerned stakeholders. Given this, the following section focuses on the education-job skills match and education-employment earnings match of individuals from instructional programs that would normally lead to work in one of the occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

The Framework describes the commitment by provincial and territorial governments and the Government of Canada to work together to create positive change for immigrants in Canada. As part of this commitment, immigrants looking to enter regulated occupations in Canada will receive clear information as early as possible in the immigration process, fair treatment during the assessment process and prompt communication of recognition decisions. Supports will also be extended to both individuals and employers to help enable immigrants' participation in the workforce (FLMM 2009).

One of the goals identified in the Framework is that individuals in eight occupational groups — architects, engineers, financial auditors and accountants, medical laboratory technologists, occupational therapists,[6] pharmacists, physiotherapists and registered nurses — will know within one year whether their qualifications will be recognized, be informed of the additional requirements necessary for registration or be directed toward related occupations commensurate with their skills and experience. By the end of 2012, six more occupations — dentists, engineering technicians, licensed

Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications – concluded

practical nurses, medical radiation technologists, physicians and teachers (K-12) — will also be included.

The government of Canada is also playing a role in facilitating foreign credential recognition in non-regulated occupations, which make up about 85 percent of the labour market. Non-regulated occupations are in sectors such as tourism, textiles, software technology, and aviation maintenance.

6.1 Education-job skills match

Similar to the analysis reported in section 4.2, the goal of this section is to examine which factors influence the likelihood, for paid workers, of working in the best corresponding or in an equivalent occupation, but for the eight specific occupations (i.e., architect, engineer, medical laboratory technologist and pathologists' assistant, nurse supervisor and registered nurse, licensed practical nurse, pharmacist, physiotherapist, and financial auditor and accountant) as identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*. As shown previously, the main indicator used to determine if individuals are working in their field or in an equivalent occupation is the 'education-job skills match' variable.

In these logistic regression models, the dependent variable equals 1 if a paid worker with credentials leading to each of the eight selected occupations has a good education-job skills match and 0 otherwise. Similar to what was performed earlier, the logistic regression analysis first considers the contribution of 'given' characteristics to the probability of having a good education-job skills match: immigrant status by region of education. Given the lower sample size shown in Table 6.1 for the eight selected occupations, however, results by 'time elapsed since landing' could not be analyzed. Some socio-demographic characteristics of paid workers also needed to be grouped together. This was the case for paid workers with credentials from North America and Oceania, as well as for those living in the Atlantic Provinces.

Table 6.1

Distribution of paid workers aged 25 to 64 with credentials leading to the eight selected occupations as identified through the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*, Canada, 2006

Occupations	Paid workers number
All selected occupations	**1,188,287**
Architect	17,578
Engineer	368,183
Medical laboratory technologist and pathologists' assistant	32,913
Nurse supervisor and registered nurse	125,375
Licensed practical nurse	215,834
Pharmacist	27,157
Physiotherapist	31,575
Financial auditor and accountant	369,672

Source: 2006 Census of Population, Statistics Canada.

The sex and age group, marital status and presence of children, province, territory and area of residence, the language ability status variable, the visible minority status variable, and the variable defining the full/part-time and full/part-year status of employment were then added progressively in order to assess their independent effects on the likelihood, for immigrant paid workers, of having a good education-job skills match.

Results

Analysis of data from the 2006 Census shows that, among paid workers in the core working-age group of 25 to 64 with credentials leading to one of the eight selected occupations, internationally-educated immigrants were, in general, less likely than their counterparts educated in Canada and the Canadian-born with a postsecondary education to have a good education-job skills match (Table 6.2).

Table 6.2 (Model 6.1)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

Effect	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
	odds ratio							
Canadian-born with a postsecondary education[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Region of education of immigrants								
Canada	0.64***	0.79***	0.60***	0.69***	0.58***	0.49***	1.04	0.83***
North America and Oceania	0.91	0.86**	0.62	0.57**	0.46***	0.45**	1.11	0.91
Latin America	0.17***	0.27***	0.33**	0.20***	0.20***	0.06***	0.22***	0.24***
Western Europe	0.33**	0.78**	0.29**	0.23***	0.57**	0.29**	0.33***	0.67**
Eastern Europe	0.24***	0.30***	0.20***	0.34***	0.25***	0.09***	0.16***	0.26***
Northern Europe	0.49**	0.96	0.51*	0.34***	0.65***	0.90	1.47*	1.04
Southern Europe	0.30***	0.45***	0.28**	0.21***	0.28***	0.10***	0.18**	0.23***
Africa	0.28***	0.34***	0.45*	0.29***	0.26***	0.42***	0.47	0.35***
West Central Asia and Middle East	0.43**	0.34***	0.57	0.31***	0.19***	0.18***	0.36*	0.33***
Eastern Asia	0.33***	0.26***	0.48**	0.15***	0.28***	0.10***	1.38	0.28***
Southeast Asia	0.05***	0.08***	0.40***	0.23***	0.22***	0.04***	0.07***	0.13***
Southern Asia	0.14***	0.22***	0.23***	0.16***	0.29***	0.06***	0.87	0.27***

* $p \leq 0.05$
** $p \leq 0.01$
*** $p \leq 0.001$
1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.
Model 6.1: After controlling for immigrant status and region of education.

The likelihood of having a good education-job skills match also varies by region from which the highest postsecondary credentials were obtained. As shown in Table 6.2, immigrant paid workers with credentials from Canada, North America and Oceania, and from Northern Europe generally showed the highest likelihood among all immigrant paid workers with credentials leading to one of the selected occupations, though the rank order of these regions varied across the selected occupations. In the case of immigrant paid workers with credentials leading to the occupations of licensed practical nurse and physiotherapist, for example, those who completed their studies in Northern Europe were slightly more likely than those with credentials from other regions to report working in their field or in an equivalent occupation. Conversely, immigrant paid workers with credentials leading to the occupation of architect, engineer, medical laboratory technologist and pathologists' assistant, nurse supervisor and registered nurse, pharmacist, and financial auditor and accountant from Canada, and from North America and Oceania were more likely than those with credentials from other regions to report having a good education-job skills match.

Sex and age group

While results from section 4.2 showed a lower likelihood of having a good education-job skills match for female paid workers overall, the results are more mixed for the eight selected occupations. In fact, as shown in Table 6.3, female paid workers with credentials leading to the occupations of nurse supervisor and registered nurse (+18%), licensed practical nurse (+11%) and physiotherapist (+52%) were all more likely than their male counterparts to report working in the best corresponding or equivalent occupation. However, those with credentials leading to the occupations of architect, engineer, pharmacist and financial auditor and accountant were less likely than their male counterparts to report such a positive employment outcome. Gender differences were not statistically significant for paid workers with credentials leading to the occupation of medical laboratory technologist and pathologists' assistant.

Table 6.3 (Model 6.2)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

Effect	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
	odds ratio							
Sex								
Male[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Female	0.80**	0.90***	1.13	1.18*	1.11*	0.61***	1.52***	0.60***
Age group								
25 to 34[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
35 to 44	1.14	1.04	1.12	0.73***	0.92	1.31**	0.80**	1.13***
45 to 54	1.42**	0.92**	1.29**	0.58***	0.74***	1.55**	0.70***	1.17***
55 to 64	1.54**	0.90**	1.05	0.47***	0.58***	1.12	0.47***	1.06*

* $p \leq 0.05$

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

Model 6.2: After controlling for immigrant status, region of education, sex and age group.

Depending on field of study, paid workers in some age groups were more likely than others to have a good education-job skills match. Among paid workers with credentials leading to the occupations of architect, medical laboratory technologist and pathologists' assistant, pharmacist, and financial auditor and accountant, for example, those in older age groups were generally more likely than paid workers aged 25 to 34 to have a good education-job skills match. Conversely, among those with credentials in engineering, nursing and physiotherapy, younger paid workers were more likely than their older counterparts to report working in their field of study or in an equivalent occupation (Table 6.3).

With variations of 4 percentage points or less, controlling for sex and age group did not, in general, have a large influence on the likelihood of working in the best corresponding or in an equivalent occupation for a majority of immigrant paid workers across the selected occupations. Such small variations in the likelihood of having a good education-job skills match seem to suggest that the distribution of immigrant paid workers according to such variables was relatively similar to that observed for the population of paid workers within each of the eight selected occupations.

Variations of more than 4 percentage points could, however, be observed among immigrant paid workers with credentials leading to the occupations of physiotherapist (42 percentage points), licensed practical nurse (11 percentage points), nurse supervisor and registered nurse (7 percentage points) and architect (5 percentage points) from Northern Europe. Immigrant paid workers with

credentials leading to the occupation of physiotherapist from Western Europe (9 percentage points) and to the occupation of nurse supervisor and registered nurse from North America and Oceania (5 percentage points) also showed variations of more than 4 percentage points in the likelihood of having a good education-job skills match when controlling for sex and age group (Table A.7.1 (columns 1 and 2), Appendix 7). In all these cases except for the occupation of architect, the age-sex distribution of the specific immigrant population played a positive role in improving the initial migrant gap observed.

Marital status and presence of children

Being married or living in a common-law relationship is associated with an increase in the likelihood of having a good education-job skills match. As shown in Table 6.4, this was generalized across the selected occupations with the exception of paid workers with credentials leading to the occupation of nurse supervisor and registered nurse. For these paid workers, those who reported being never married or living in a common-law relationship were, in fact, 12% more likely than those being in this type of relationship to report a good education-job skills match.

Table 6.4 (Model 6.3)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

Effect	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
	odds ratio							
Marital status								
Married or in a common-law relationship[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Divorced	0.57**	0.72***	0.63***	1.07	0.89***	0.63**	0.53***	0.80***
Separated	0.70	0.71***	0.65**	0.74**	0.69***	0.90	0.48***	0.75***
Never married or in a common-law relationship	0.74**	0.73***	0.88	1.12 *	0.91 *	0.79	0.90	0.70***
Widowed	0.34 *	0.79 *	0.54**	0.81	0.62***	1.26	0.98	0.63***
Presence of children								
No children[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Pre-school children	0.69**	1.05 *	1.36**	1.12	1.37***	1.08	0.99	1.04
Older children	0.72**	0.94**	1.02	1.14**	1.22***	1.10	0.96	0.95**

* $p \leq 0.05$
** $p \leq 0.01$
*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.
Model 6.3: After controlling for immigrant status, region of education, sex, age group, marital status and presence of children.

The impact of the presence of pre-school children (aged 5 and under) was not as obvious. As shown in Table 6.4, compared to paid workers without any children, while the likelihood of having a good education-job skills match was higher for paid workers with credentials leading to the occupations of engineer (+5%), medical laboratory technologist and pathologists' assistant (+36%), and licensed practical nurse (+37%), this likelihood was lower for those with credentials leading to the occupation of architect (-31%). Differences were not statistically significant for paid workers with credentials leading to the occupations of nurse supervisor and registered nurse, pharmacist, physiotherapist, and financial auditor and accountant.

Controlling for marital status and presence of children had none to very small influence on the likelihood of working in the best corresponding or in an equivalent occupation among internationally-educated paid workers with credentials leading to the eight selected occupations. With variations of around 4 percentage points, immigrant paid workers with credentials leading to the occupation of medical laboratory technologist and pathologists' assistant from Africa and Eastern Asia showed the largest variations. Variations of less than 3 percentage points were observed among all of the other internationally-educated immigrant paid workers (Table A.7.1 (columns 2 and 3), Appendix 7).

In the case of immigrant paid workers educated in Canada, the odds ratios remained pretty much stable across all eight occupations; variations of about 2 percentage points for those with credentials leading to the occupation of medical laboratory technologist and pathologists' assistant, and of 1 percentage point or less for immigrant paid workers with credentials leading to the other seven occupations. Differences were not statistically significant for Canadian-educated immigrant paid workers with credentials leading to the occupation of physiotherapist (Table A.7.1 (columns 2 and 3), Appendix 7).

Again, similar to what was observed for sex and age group, such small variations in the likelihood of having a good education-job skills match when controlling for marital status and presence of children seem to suggest that the distribution of immigrant paid workers according to these variables was relatively similar to that observed for the population of paid workers within each of the eight selected occupations.

Province, territory and area of residence

As shown in Table 6.5, no specific pattern was found by province and territory with regard to the likelihood of having a good education-job skills match among paid workers with credentials leading to the eight selected occupations. Depending on the field of study, some paid workers were more likely than those from Ontario to report a good education-job skills match. This was the case for paid workers with credentials leading to the occupation of architect from Manitoba (+90%) and British Columbia (+40%); to the occupation of engineer from Quebec (+11%) and Alberta (+15%); to the occupation of medical laboratory technologist and pathologists' assistant from the Atlantic Provinces (+68%), Quebec (+56%), Manitoba (+120%), Saskatchewan (+53%) and Alberta (+26%); to the occupation of nurse supervisor and registered nurse from the Atlantic Provinces (+28%) and

Quebec (+33%); to the occupation of physiotherapist from the Atlantic Provinces (+44%); and those with credentials leading to the occupation of financial auditor and accountant from Alberta (+11%). Paid workers with credentials leading to the occupation of licensed practical nurse and pharmacist living in Ontario were, on the other hand, more likely than those from all of the other provinces to report having a good education-job skills match.

Table 6.5 (Model 6.4)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

Effect	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
	odds ratio							
Province and territory								
Ontario[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Atlantic provinces	1.53	0.82***	1.68**	1.28**	0.98	0.56**	1.44*	0.61***
Quebec	1.13	1.11***	1.56***	1.33***	1.04	0.89	1.15	0.75***
Manitoba	1.90*	0.71***	2.20**	0.95	0.78***	1.10	1.01	0.97
Saskatchewan	0.78	0.86*	1.53*	0.96	0.99	1.67	0.52***	1.00
Alberta	1.19	1.15***	1.26*	0.95	0.67***	0.82	0.33***	1.11**
British Columbia	1.40**	0.84***	1.10	0.86**	0.66***	0.56***	0.75**	1.03
Territories	7.12	1.02	2.48	0.99	0.84	0.54	0.41	1.31
Area of residence								
Population centre[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Rural area	0.68*	0.71***	0.82*	0.83**	0.94*	1.43*	0.60***	0.88***

* $p \leq 0.05$

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

Model 6.4: After controlling for immigrant status, region of education, sex, age group, marital status, presence of children, province, territory and area of residence.

In the case of the area of residence, paid workers residing in rural area were generally less likely than those living in population centres to report working in their field of study or in an equivalent occupation. The only exception to this were paid workers with credentials leading to the occupations of pharmacist, who were 43% more likely than their counterparts living in population centres to report a good education-job skills match (Table 6.5).

With variations of 4 percentage points or less, controlling for location of residence (i.e., province, territory, population centre and rural area) had, in general, a relatively small influence on the likelihood of working in the best corresponding or in an equivalent occupation among immigrant paid workers with credentials leading to the eight selected occupations.

Larger variations when controlling for location of residence could, however, be observed among immigrant paid workers with credentials leading to the occupation of medical laboratory technologist and pathologists' assistant from Canada (8 percentage points); to the occupation of nurse supervisor and registered nurse from North America and Oceania (5 percentage points); to the occupation of licensed practical nurse from Northern Europe (6 percentage points); to the occupation of physiotherapist from Latin America (5 percentage points), Northern Europe (12 percentage points) and Africa (5 percentage points); and, finally, to the occupation of financial auditor and accountant from Canada (9 percentage points), and North America and Oceania (10 percentage points) (Table A.7.1 (columns 3 and 4), Appendix 7). Such larger variations for these immigrant paid workers seem to suggest a relatively different distribution according to location of study when compared to the population of paid workers within each of the eight selected occupations.

Ability to conduct a conversation in Canada's official languages

Results reported in Table 6.6 show that, with the exception of paid workers with credentials leading to the occupation of medical laboratory technologist and pathologists' assistant, those who reported knowing both official languages were generally more likely than paid workers speaking English only to have a good education-job skills match. Differences were not statistically significant for those with credentials leading to the occupations of licensed practical nurse and pharmacist.

Table 6.6 (Model 6.5)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Effect	odds ratio							
English only[1]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
French only	1.27	0.74***	0.86	1.42**	1.24**	0.91	1.40	0.78***
Both English and French	2.37***	1.42***	0.78*	1.27**	1.08	1.22	1.89***	1.13**
Neither English nor French	0.64	0.37***	0.32*	0.28**	0.17***	0.04***	0.19	0.40***

* $p \leq 0.05$

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

Model 6.5: After controlling for immigrant status, region of education, sex, age group, marital status, presence of children, province, territory, area of residence and language ability status.

Conversely, paid workers with credentials leading to one of the selected occupations and who reported not being able to converse in at least one of Canada's official languages were less likely than their counterparts speaking English only to report working in their field of study or in an equivalent occupation. Results were not statistically significant for those with credentials leading to the occupations of architect and physiotherapist (Table 6.6).

The likelihood of having a good education-job skills match was not as obvious for paid workers who reported speaking French only. In fact, as shown in Table 6.6, while paid workers with credentials leading to nursing (i.e., nurse supervisor and registered nurse, and licensed practical nurse) were more likely than their counterparts speaking English only to work in their field of study or in an equivalent occupation, those with credentials leading to the occupations of engineer, and financial auditor and accountant showed the opposite. Results were not statistically significant for those with credentials leading to the occupations of architect, medical laboratory technologist and pathologists' assistant, pharmacist and physiotherapist.

As can be observed in Appendix 7, with variations ranging from 1 to 3 percentage points, controlling for language ability had, in general, a relatively small influence on the likelihood of having a good education-job skills match among immigrant paid workers with credentials leading to the eight selected occupations. Immigrant paid workers with credentials leading to the occupation of architect from Eastern Asia; to the occupation of physiotherapist from Western and Northern Europe; to the occupation of nurse supervisor and registered nurse from Eastern Europe; and to the occupation of medical laboratory technologist and pathologists' assistant from Eastern Asia were the only exceptions to this, with variations ranging from about 4 to 5 percentage points (Table A.7.1 (columns 4 and 5), Appendix 7).

As mentioned earlier, such small variations in the likelihood of having a good education-job skills match when controlling for language ability seem to suggest that the distribution of immigrant paid workers according to these variables was relatively similar to that observed for the population of paid workers within each of the eight selected occupations.

Visible minority status

As shown in Table 6.7, other than for paid workers with credentials leading to the occupation of physiotherapist (+58%), the analysis finds that being a member of a visible minority group decreased the likelihood of working in the corresponding or in an equivalent occupation. Results were not statistically significant for paid workers with credentials leading to the occupations of architect and pharmacist.

Table 6.7 (Model 6.6)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Effect	odds ratio							
Not member of a visible minority group[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Member of a visible minority group	0.85	0.73***	0.68**	0.81**	0.59***	0.89	1.58**	0.75***

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

Model 6.6: After controlling for immigrant status, region of education, sex, age group, marital status, presence of children, province, territory, area of residence, language ability status and visible minority status.

Except for those with credentials leading to the occupation of pharmacist (with variations ranging from 0 to 3 percentage points), the analysis finds that controlling for visible minority status did have, in general, a significant impact on the likelihood that immigrants (either educated in Canada or abroad) would be working in the best corresponding or an equivalent occupation.

With variations of more than 10 percentage points, immigrant paid workers with credentials leading to the occupation of medical laboratory technologist and pathologists' assistant from Latin America (14 percentage points), Southeast (18 percentage points) and Southern Asia (10 percentage points); to the occupation of licensed practical nurse from Canada (20 percentage points), Latin America (12 percentage points), Africa (11 percentage points), Eastern (20 percentage points), Southeast (16 percentage points) and Southern Asia (19 percentage points); and to the occupation of financial auditor and accountant from Canada (14 percentage points), and North America and Oceania (12 percentage points) showed the highest increases in percentage points in the likelihood of reporting a good education-job skills match (Table A.7.1 (columns 5 and 6), Appendix 7). Such larger variations for these immigrant paid workers suggest a relatively different distribution according to visible minority status, which, when compared to the population of paid workers within each of the eight selected occupations, played a positive role in reducing significantly the remaining migrant gap before introducing this variable in the model.

Full/part-time and full/part-year status of employment

Results from Table 6.8 show that paid workers who reported being employed full-time for the full year were more likely than those being employed part-time for part or the full year or being employed full-time for part of the year to have a good education-job skills match for each of the eight selected occupations. Differences were not statistically significant for paid workers with credentials leading to the occupation of architect who reported being employed part-time for the full year.

Table 6.8 (Model 6.7)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Effect	odds ratio							
Employed part-time for part of the year[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Employed part-time for the full year	1.13	1.27**	2.06***	1.43***	1.00***	2.05**	1.93***	1.26***
Employed full-time for part of the year	1.92**	1.83***	1.29*	1.24**	1.60	1.84**	1.67***	2.15***
Employed full-time for the full year	2.68***	3.05***	2.30***	1.83***	1.83***	3.34***	2.25***	3.32***

* $p \leq 0.05$

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category.

Notes: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

Model 6.7: After controlling for immigrant status, region of education, sex, age group, marital status, presence of children, province, territory, area of residence, language ability status, visible minority status, and full/part-time and full/part-year status of employment.

Unlike what was observed for paid workers overall, controlling for the full/part-time and full/part-year status of employment did not have a clear influence on the likelihood of working in the best corresponding or an equivalent occupation among immigrant paid workers with credentials leading to the eight selected occupations. In fact, as shown in Appendix 7, while variations in the likelihood of reporting a good education-job skills match remained below 5 percentage points for a majority of immigrant paid workers with credentials leading to one of the eight selected occupations, those for immigrant paid workers with credentials leading to the occupation architect from West Central Asia and the Middle East (6 percentage points); to the occupation of engineer from Western Europe (7 percentage points); and to the occupation of licensed practical nurses in general were relatively larger (Table A.7.1 (columns 6 and 7), Appendix 7).

The highest variations in the likelihood of reporting a good education-job skills match were observed among immigrant paid workers with credentials leading to the occupation of licensed practical nurse. These results are not surprising considering that, compared to immigrants with credentials leading to the other selected occupations, a higher proportion of those immigrants reported working on a part-time basis. Variations ranging from 11 to 76 percentage points were observed among these immigrants (Table A.7.1 (columns 6 and 7), Appendix 7).

6.2 Education-employment earnings match

This section presents results similar to those discussed in the previous section, but for Employment outcome #2 (i.e., likelihood of having a good education-employment earnings match).

As shown in Table 6.9, given the small number of full-time full-year paid workers with credentials leading to the eight selected occupations, results by 'time elapsed since landing' could not be analyzed. Similarly, it was necessarily to group several of the analysed characteristics. This was the case for full-time full-year paid workers with credentials from North America and Oceania, Latin America and Africa, as well as those with credentials from all regions of Europe and Asia. Full-time full-year paid workers who reported being divorced, separated or widowed were grouped within a single category of marital status. Full-time full-year paid workers living in Manitoba, Saskatchewan and Alberta were grouped together, as were those from British Columbia and the territories, and those who reported living in the Atlantic Provinces.

Table 6.9

Distribution of full-time full-year paid workers aged 25 to 64 with credentials leading to the eight selected occupations as identified through the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*, Canada, 2006

	Full-time full-year paid workers
Selected occupations	number
All selected occupations	**787,151**
Architect	12,538
Engineer	269,932
Medical laboratory technologist and pathologists' assistant	20,374
Nurse supervisor and registered nurse	69,579
Licensed practical nurse	115,450
Pharmacist	18,223
Physiotherapist	17,825
Financial auditor and accountant	263,230

Note: Includes full-time full-year paid workers aged 25 to 64 not attending school and who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight occupations as identified through the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

Source: 2006 Census of Population, Statistics Canada.

Results

Analysis of data from the 2006 Census shows that full-time full-year internationally-educated immigrant paid workers with credentials leading to one of the eight selected occupations were generally less likely than their counterparts educated in Canada and full-time full-year Canadian-born paid workers with a postsecondary education to have earnings at or above the median for the occupation corresponding best to their field of study. As shown in Table 6.10, this was especially the case for immigrants with credentials from Asia, Latin America and Africa. Those educated in North America and Oceania, and Europe showed the highest likelihood of having a good education-employment earnings match among all full-time full-year internationally-educated immigrant paid workers in 2006, and this, for the majority of the eight selected occupations. Full-time full-year immigrant paid workers with credentials from North America and Oceania leading to the occupation of nurse supervisor and registered nurse and to the occupation of financial auditor and accountant were, for example, 58% and 28% more likely than their counterparts born in Canada to report earnings at or above the median for the occupation corresponding best to their field of study.

Table 6.10 (Model 6.8)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Effect	odds ratio							
Canadian-born with a postsecondary education[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Region of education of immigrants								
Canada	0.81***	0.81***	0.80	1.16**	0.91	0.83 *	1.26	1.03
North America and Oceania	0.72	0.79**	1.01	1.58**	0.52	0.93	1.84	1.28 *
Latin America and Africa	0.18***	0.34***	0.19**	0.61 *	0.07**	0.93	1.36	0.41***
Europe	0.56**	0.50***	0.24**	0.89	0.29***	0.64**	1.35	0.60***
Asia	0.09***	0.19***	0.39***	0.92	0.02**	0.21***	0.88	0.29***

* $p \leq 0.05$
** $p \leq 0.01$
*** $p \leq 0.001$

1. Reference category.

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications.*
Model 6.8: After controlling for immigrant status and region of education.

Sex and age group

Although results from the previous section showed that, for some of the selected occupations, female paid workers were more likely than their male counterparts to have a good education-job skills match, results from Table 6.11 showed that their earnings were, on the other hand, generally lower than those reported by their full-time full-year male counterparts. Differences were not statistically significant for full-time full-year paid workers with credentials leading to the occupations of architect, and medical laboratory technologist and pathologists' assistant.

Table 6.11 (Model 6.9)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Effect	odds ratio							
Sex								
Male[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Female	0.81	0.54***	1.01	0.85 *	0.77**	0.50***	0.56***	0.49***
Age group								
25 to 34[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
35 to 44	3.71***	2.26***	2.56***	1.77***	1.19	1.15	1.35**	1.15***
45 to 54	6.06***	2.64***	3.02***	1.89***	1.48***	1.43**	1.85***	1.07 *
55 to 64	5.86***	2.80***	3.17***	1.59***	1.06	1.13	1.60**	0.87**

* $p \leq 0.05$
** $p \leq 0.01$
*** $p \leq 0.001$

1. Reference category.

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.
Model 6.9: After controlling for immigrant status, region of education, sex and age group.

Similar to what was observed among full-time full-year paid workers overall (Section 5.2), those in older age groups who reported credentials leading to one of the eight selected occupations were, in general, more likely than their counterparts aged 25 to 34 to report earnings at or above the median for the occupation corresponding best to their field of study. This was especially the case for full-time full-year paid workers with credentials leading to the occupations of architect (+486%), engineer (+180%), and medical laboratory technologist and pathologists' assistant (+217%) (Table 6.11).

Other than for full-time full-year immigrant paid workers with credentials leading to the occupation of architect from Canada (6 percentage points) and Europe (12 percentage points); to the occupation of engineer from North America and Oceania (11 percentage points) and Europe (6 percentage points); to the occupation of nurse supervisor and registered nurse from North America and Oceania (9 percentage points); and to the occupation of financial auditor and accountant from Latin America and Africa (5 percentage points) where variations ranging from 5 to 12 percentage points were observed, controlling for sex and age group resulted in variations of 4 percentage points or less in the likelihood of reporting earnings at or above the median for the occupation corresponding best to their field of study for a majority of full-time full-year immigrant paid workers with credentials leading to the eight selected occupations (Table A.8.1 (columns 1 and 2), Appendix 8). Such small variations in the likelihood of having a good education-employment earnings match when controlling for sex and age group suggest that the distribution of full-time full-year immigrant paid workers according to such variables was relatively similar to that observed for the population of full-time full-year paid workers within each of the eight selected occupations.

Differences were not statistically significant for full-time full-year immigrant paid workers with credentials leading to the occupation of physiotherapist from all regions of education (Table A.8.1 (columns 1 and 2), Appendix 8).

Marital status and presence of children

Similar to results observed earlier for the education-job skills match for the selected occupations, being married or living in a common-law relationship had a positive influence on the likelihood of having earnings at or above the median for the occupation corresponding best to their field of study. Results from Table 6.12 show that, with the exception of those with credentials in nursing (i.e., nurse supervisor and registered nurse, and licensed practical nurse), the likelihood of having a good education-employment earnings match was higher for full-time full-year paid workers who reported being married or living in a common-law relationship. Differences were not statistically significant for full-time full-year paid workers with credentials leading to the occupations of medical laboratory technologist and pathologists' assistant, nurse supervisor and registered nurse, pharmacist and physiotherapist who reported being divorced, separated or widowed, and for those with credentials leading to the occupations of architect, medical laboratory technologist and pathologists' assistant, and physiotherapist who reported never been married or in a common-law relationship.

Table 6.12 (Model 6.10)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

Effect	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
	odds ratio							
Marital status								
Married or in a common-law relationship[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Divorced, separated or widowed	0.56**	0.75***	0.91	1.08	1.23**	0.95	0.83	0.75***
Never married or in a common-law relationship	0.73	0.64***	1.22	1.13 *	1.28**	0.77**	0.80	0.87***
Presence of children								
No children[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Pre-school children	0.78	1.16***	0.84	0.66***	0.85	0.72**	0.92	1.18***
Older children	0.99	1.12***	0.88	1.01	0.95	0.82 *	0.90	0.99

* $p \leq 0.05$

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category.

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.
Model 6.10: After controlling for immigrant status, region of education, sex, age group, marital status and presence of children.

The effect of presence of children, either aged 5 and under or over 5 years of age, was not as clear. As shown in Table 6.12, compared to full-time full-year paid workers without children, while the likelihood of having a good education-employment earnings match was higher for full-time full-year paid workers with credentials leading to the occupations of engineer, and financial auditor and accountant, this likelihood was lower for those with credentials leading to the occupations of nurse supervisor and registered nurse, and pharmacist. Differences were not statistically significant for paid workers with credentials leading to the occupations of architect, medical laboratory technologist and pathologists' assistant, licensed practical nurse and physiotherapist.

Controlling for marital status and presence of children had none to very small influence on the likelihood of reporting earnings at or above the median for the occupation corresponding best to their field of study among full-time full-year immigrant paid workers with credentials leading to the eight selected occupations (i.e., variations below 3 percentage points) (Table A.8.1 (columns 2 and 3), Appendix 8). Again, such small variations in the likelihood of having a good education-employment earnings match when controlling for marital status and presence of children seem to suggest that the distribution of full-time full-year immigrant paid workers according to these variables was relatively similar to that observed for the population of full-time full-year paid workers within each of the eight selected occupations.

Differences were not statistically significant for full-time full-year immigrant paid workers with credentials leading to the occupation of physiotherapist from all regions of education (Table A.8.1 (columns 2 and 3), Appendix 8).

Province, territory and area of residence

Although not generalized across all of the eight selected occupations, full-time full-year paid workers residing in Ontario were generally more likely than their counterparts living in all other provinces and territories to report earnings at or above the median for the occupation corresponding best to their field of study. As shown in Table 6.13, the only exceptions to this were for full-time full-year paid workers with credentials leading to the occupations of architect living in the Prairies (+45%) and in British Columbia and the territories (+52%); the occupation of engineer living in the Prairies (+59%); and the occupation of medical laboratory technologist and pathologists' assistant living in British Columbia and the territories (+31%), who were all more likely than their counterparts living in Ontario to report a good education-employment earnings match. Full-time full-year paid workers in the Atlantic Provinces and Quebec were, on the other hand, generally less likely to report such earnings levels.

Table 6.13 (Model 6.11)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Effect	odds ratio							
Province and territory of residence								
Ontario[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Atlantic provinces	1.58	0.72***	0.13***	0.58***	0.83 *	0.46***	0.62**	0.56***
Quebec	1.00	0.86**	0.08***	0.50***	0.96	0.58***	0.50***	0.78***
Prairies	1.45 *	1.59***	0.76**	1.03	0.94	1.03	0.57***	0.87***
British Columbia and territories	1.52**	0.84***	1.31 *	0.93	0.80 *	0.67**	0.82	0.77***
Area of residence								
Population centre[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Rural area	0.52**	0.80***	0.85	0.82***	1.03	1.02	1.09	0.60***

* $p \leq 0.05$
** $p \leq 0.01$
*** $p \leq 0.001$

1. Reference category.

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.
Model 6.11: After controlling for immigrant status, region of education, sex, age group, marital status, presence of children, province, territory and area of residence.

In the case of area of residence, full-time full-year paid workers living in population centres were generally more likely than their counterparts living in rural areas to have a good education-employment earnings match (Table 6.13). Differences were not statistically significant for full-time full-year paid workers with credentials leading to the occupations of medical laboratory technologist and pathologists' assistant, licensed practical nurse, pharmacist and physiotherapist.

Depending on the field of study, controlling for location of residence (i.e., province, territory, population centre and rural area) had different impacts on the likelihood of reporting a good education-employment earnings match among full-time full-year immigrant paid workers. Full-time full-year immigrant paid workers with credentials leading to the occupations of architect, engineer and licensed practical nurse, for example, showed variations in the likelihood of having a good education-employment earnings match below 3 percentage points when controlling for location of residence, and this, independently of their region of education.

Variations ranging from 3 to 15 percentage points were, however, observed among full-time full-year immigrant paid workers with credentials leading to the occupations of medical laboratory technologist and pathologists' assistant, nurse supervisor and registered nurse, pharmacist, and financial auditor and accountant. Differences were not statistically significant for full-time full-year immigrant paid workers with credentials leading to the occupation of physiotherapist from all regions of education (Table A.8.1 (columns 3 and 4), Appendix 8).

More precisely, variations in the likelihood of reporting earnings at or above the median for the occupation corresponding best to their field of study decreased by more than 5 percentage points for those with credentials leading to the occupation of medical laboratory technologist and pathologists' assistant from Asia (15 percentage points) and Europe (7 percentage points); to the occupation of nurse supervisor and registered nurse from Latin America and Africa (9 percentage points); to the occupation of pharmacist from Europe (9 percentage points); and to the occupation of financial auditor and accountant from Europe (8 percentage points) (Table A.8.1 (columns 3 and 4), Appendix 8).

Combining such results with those obtained from the previous section suggest the existence of a certain trade-off between the likelihood of 'working in the best corresponding or in an equivalent occupation' and 'finding a job with a good pay' for immigrant paid workers with credentials leading to some specific occupations. In the case of immigrant paid workers with credentials leading to the occupation of licensed practical nurse, for example, while location of residence had a relatively low influence on their likelihood to report a good education-employment earnings match, this same factor had a much higher influence on their likelihood to report a good education-job skills match. The reverse could be observed for immigrant paid workers with credentials leading to the occupation of pharmacist (Table A.7.1 (columns 3 and 4), Appendix 7 and Table A.8.1 (columns 3 and 4), Appendix 8).

Ability to conduct a conversation in Canada's official languages

As shown in Table 6.14, with the exception of full-time full-year paid workers with credentials leading to the occupation of licensed practical nurse, the likelihood of having earnings at or above the median for the occupation corresponding best to their field of study was higher for those with knowledge of English only or of both official languages. Results were not statistically significant for those with credentials leading to the occupations of engineer, medical laboratory technologist and pathologists' assistant, nurse supervisor and registered nurse, pharmacist and physiotherapist.

Table 6.14 (Model 6.12)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Effect	odds ratio							
English only[1]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
French only	1.36	0.61***	0.44	1.07	1.80**	1.23	1.32	0.65***
Both English and French	1.62**	1.05	1.05	1.01	0.80*	1.26	1.20	1.26***
Neither English nor French	..	0.35*	..	0.45	..	..	0.78	0.29*

.. not available for a specific reference period

* $p \leq 0.05$

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category.

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

Model 6.12: After controlling for immigrant status, region of education, sex, age group, marital status, presence of children, province, territory, area of residence and language ability status.

Full-time full-year paid workers who reported not being able to converse at least one of Canada's official languages and those who reported speaking French only were, in general, less likely than those speaking English only to report having earnings at or above the median for the occupation corresponding best to their field of study (Table 6.14). The only exception to this was full-time full-year paid workers with credentials leading to the occupation of licensed practical nurse; those who reported speaking French only were 80% more likely than their counterparts speaking English only to report a good education-employment earnings match. Results were not statistically significant for full-time full-year French-speaking paid workers with credentials leading to the occupations of architect, medical laboratory technologist and pathologists' assistant, nurse supervisor and registered nurse, pharmacist and physiotherapist, and for those speaking in neither of Canada's official languages with credentials leading to the occupations of architect, medical laboratory technologist and pathologists' assistant, nurse supervisor and registered nurse, licensed practical nurse, pharmacist and physiotherapist.

Controlling for language ability had none to very little influence on the likelihood of reporting a good education-employment earnings match among full-time full-year immigrant paid workers with credentials leading to one of the eight selected occupations. Variations of less than 2 percentage points were observed for a majority of them, and this, independently of their region of education. Differences were not statistically significant for full-time full-year immigrant paid workers with credentials leading to the occupation of physiotherapist from all regions of education (Table A.8.1 (columns 4 and 5), Appendix 8).

Visible minority status

As shown in Table 6.15, other than for full-time full-year paid workers with credentials leading to the occupation of financial auditor and accountant, the analysis finds that being a member of a visible minority group decreased the likelihood of having a good education-employment earnings match. Differences were not statistically significant for paid workers with credentials leading to the occupations of medical laboratory technologist and pathologists' assistant, nurse supervisor and registered nurse, licensed practical nurse, pharmacist and physiotherapist.

Table 6.15 (Model 6.13)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year paid workers aged 25 to 64 with credentials leading to the eight selected occupations, Canada, 2006

Effect	Architect	Engineer	Medical laboratory technologist and pathologists' assistant	Nurse supervisor and registered nurse	Licensed practical nurse	Pharmacist	Physio-therapist	Financial auditor and accountant
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
	odds ratio							
Not member of a visible minority group[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Member of a visible minority group	0.58**	0.81***	1.00	1.05	1.27	0.89	1.21	1.17**

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category.

Notes: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

Model 6.13: After controlling for immigrant status, region of education, sex, age group, marital status, presence of children, province, territory, area of residence, language ability status and visible minority status.

Similar to what was observed for location of residence, the impact of controlling for visible minority status on the odds, for full-time full-year immigrant paid workers, of having a good education-employment earnings match seems to vary according to the field of study. As shown in Appendix 8, after controlling for visible minority status, the large majority of full-time full-year immigrant paid workers with credentials leading to the occupations of medical laboratory technologist and pathologists' assistant, nurse supervisor and registered nurse, licensed practical nurse and pharmacist, for example, showed variations of less than 3 percentage points in the likelihood of reporting earnings at or above the median for the occupation corresponding best to their field of study.

Variations of more than 5 percentage points were, on the other hand, observed for those with credentials leading to the occupation of architect from Latin America and Africa (7 percentage points); to the occupation of engineer from Canada (10 percentage points), and North America and Oceania (9 percentage points); and to the occupation of financial auditor and accountant from Canada (8 percentage points). Differences were not statistically significant for full-time full-year immigrant paid workers with credentials leading to the occupation of physiotherapist from all regions of education (Table A.8.1 (columns 5 and 6), Appendix 8). Such larger variations for these full-time full-year immigrant paid workers suggest a relatively different distribution according to visible minority status when compared to the population of full-time full-year paid workers within each of the eight selected occupations.

Summary

Results from the 2006 Census show that internationally-educated immigrant paid workers with credentials leading to one of the eight selected occupations were, in general, less likely than their counterparts educated in Canada and Canadian-born paid workers with a postsecondary education to have good education-job and education-employment earning matches. Regions from which these immigrants reported completing their credentials had a clear influence on the likelihood that these immigrants would be working in the corresponding field or in an equivalent occupation or to have earnings at or above the median for the occupation corresponding best to their field of study. As observed earlier, immigrant paid workers with credentials earned in Canada, North America and Oceania, and different regions in Europe showed the highest likelihood of having 'positive' outcomes among all immigrant paid workers with credentials leading to one of the selected occupations. The rank order of these regions did, however, vary by the type of credentials obtained.

Although, for some of the selected occupations (i.e., medical laboratory technologist and pathologists' assistant, nurse supervisor and registered nurse and physiotherapist), female paid workers were no less likely than their male counterparts to report a good education-job skills match, they were, however, less likely to report earnings at or above the median for the occupation corresponding best to their field of study.

Similar to what was observed for full-time full-year paid workers in general, those in older age groups who reported credentials leading to one of the eight selected occupations were, in general, more likely than their counterparts aged 25 to 34 to report earnings at or above the median for the occupation corresponding best to their field of study.

The influence of the age was not as obvious in the case of the education-job skills match. Among paid workers with credentials leading to the occupations of architect, medical laboratory technologist and pathologists' assistant, pharmacist, financial auditor and accountant, for example, those in older age groups were generally more likely than paid workers aged 25 to 34 to have a good education-job skills match. Conversely, among those with credentials in engineering, nursing and physiotherapy, younger paid workers were more likely than their older counterparts to report working in their field of study or in an equivalent occupation.

As observed earlier, other than for paid workers with credentials in nursing, being married or living in a common-law relationship seems to increase the likelihood of having 'positive' outcomes in the Canadian labour market. The presence of pre-school children was not as clear and not generalized across all eight selected occupations.

No specific pattern was found by province and territory with regard to the likelihood of having a good education-job skills match among paid workers with credentials leading to the eight selected occupations. In the case of the education-employment earnings match, although not generalized across all selected occupations, full-time full-year paid workers residing in Ontario were, in general, more likely than their counterparts living elsewhere in Canada to report earnings at or above the one corresponding best to their field of study. Those in the Atlantic Provinces and Quebec were, on the other hand, generally less likely to report such earnings levels.

As observed previously, paid workers with credentials leading to all eight selected occupations and living in population centres were, in general, more likely than their counterparts in rural areas to have a good education-job skills match or a good education-employment earnings match. Paid workers with credentials in pharmacy and living in rural areas were the only exception to this. In fact, results from the 2006 Census showed that they were about 43% more likely than their counterparts living in population centres to report working in their field or in an equivalent occupation.

As shown by the 2006 Census, paid workers who reported knowing both official languages were, in general, more likely than speaking English only to have a good education-job skills match or to have earnings at or above the median for the occupation corresponding best to their field of study.

Finally, the influence of visible minority groups on the likelihood of having 'positive' outcomes in the Canadian labour market was not clear and, for the large majority of the selected occupations, was not statistically significant.

Section 7

Summary and concluding remarks

Unlike the waves of immigrants who arrived in the 1950s and 1960s, those arriving in Canada since the 1970s have possessed relatively high educational levels, making an enormous contribution to the pool of individuals in Canada with postsecondary qualifications (Reitz 2007). Upon their arrival however, many immigrants initially face difficulties finding employment related to their field of study as well as finding jobs that pay relatively high wages. As observed by Boudarbat and Chernoff (2009), if one of the main functions of education, obtained either inside or outside the country, is to provide skills that will be used in subsequent employment, then it would be an inefficient use of resources, for both individuals and for society as a whole, not to use their education in their jobs.

The successful integration of immigrants in the Canadian labour market is of interest to the Canadian public and to current and potential immigrants, alike. While different measures can be used to assess what would be considered a 'successful' integration for these immigrants, the present report focused exclusively on the following two 'positive' employment outcomes: 1) working in an occupation corresponding to their field of study or in an occupation requiring similar or higher skill levels, and 2) having earnings at or above the national median earnings calculated for the occupation corresponding best to their field of study. Factors and determinants most likely associated with those 'positive' outcomes were examined throughout the report.

Given the purpose of this report, which was to identify the factors and determinants most likely to lead to the 'successful' integration of internationally-educated immigrants in the Canadian labour market, only individuals in the core working-age group of 25 to 64 with a postsecondary education who reported not attending school in 2006 and working for pay were included. To determine if these individuals were working in their field of study or in an equivalent occupation, only those who reported having completed their postsecondary education in one of the instructional programs leading to the targeted occupations as identified by the FCR Program at HRSDC were selected.

In the context of this report, there is no attempt to define 'precisely' what should be considered a 'successful' or a 'poor' integration in the labour market for these immigrants. The interpretation is left completely to the discretion of the reader as, in the opinion of the author, such a concept is arbitrary and subject to debate.

As shown by the 2006 Census, internationally-educated immigrants were generally less likely than their Canadian-educated counterparts and the Canadian-born with a postsecondary education to be employed in their field or in occupations requiring similar or higher skill levels. This was also true with regard to the education-employment earnings match.

Regions from which credentials were obtained had a clear influence on the likelihood, for these immigrants, of having 'positive' outcomes in the Canadian labour market. Immigrant paid workers with credentials from Canada, North America, and from different regions of Europe showed the highest likelihood of having good education-job skills match or education-employment earnings match. The ranking order of these regions did, however, vary by the type of credentials obtained.

Time elapsed since landing also figured among the characteristics and determinants more closely associated with a 'successful' integration of internationally-educated immigrants in the Canadian labour market. Those established in the country for more than ten years were generally more likely than their recent and very-recent counterparts to be working in the best corresponding or an equivalent occupation or to report a good education-employment earnings match. One should note, however, that although these difficulties seem to ease over time, internationally-educated immigrant paid workers established in the country for more than ten years were still generally less likely than their counterparts born in Canada to report such 'positive' outcomes.

Not all core working-age paid workers faced the same challenges — depending on the field of study, some were more likely than others to report good education-job or education-employment earnings matches in 2006. Not surprisingly, paid workers who studied in programs where there was a clear relationship between educational credentials and the ability to meet the requirements to work — such as for most regulated occupations and trades — generally had a higher likelihood of having 'positive' outcomes in the Canadian labour market than those who had studied in a field for which this relationship was not as direct.

Provincially, paid workers living in Alberta and the territories were more likely than their counterparts in Ontario and the other provinces to report working in the best corresponding or an equivalent occupation or to report a good education-employment earnings match. On the other hand, paid workers residing in the Atlantic Provinces, followed closely by those in Quebec had the lowest probabilities of having such 'positive' outcomes in the Canadian labour market.

Results also showed that, compared to the knowledge of English only, being able to converse in both official languages increases the likelihood of having good education-job and education-employment earnings matches. Conversely, paid workers who reported not being able to converse in at least one of Canada's official languages, or in French only, were less likely than those speaking English only to report such 'positive' outcomes.

Finally, the analysis found that being a man, living in a married or common-law relationship, having pre-school children, living in population centres, and the fact of working on a full-time full year basis in the case of the education-job skills match, also figure among the characteristics and determinants more closely associated with a 'successful' integration of paid workers in the Canadian labour market. The influence of age and the fact of being a member of a visible minority group was not as clear when analyzed throughout the selected occupations and could not be generalized.

Similar results could be observed among immigrant paid workers in general (including internationally-educated immigrant paid workers). Although with different intensity, controlling for factors such as sex and age group, marital status and presence of children, level of education and major instructional program, location of residence (i.e., province, territory, population centre and rural area), language ability, visible minority status, and full/part-time and full/part-year status of employment all had some influence on the likelihood that these immigrants would have a good education-job skills match and good employment earnings.

References

Beach, Charles M. and Christopher Worswick. 1993. *Is There a Double-Negative Effect on the Earnings of Immigrant Women?* Canadian Public Policy 19(1): 36-53.

Bonikowska, Aneta, David A. Green and W. Craig Riddell. 2008. *Literacy and the Labour Market: Cognitive Skills and Immigrant Earning*. International Adult Literacy Survey. Statistics Canada Catalogue number 89-552-M No. 020. http://www.statcan.gc.ca/pub/89-552-m/89-552-m2008020-eng.pdf.

Boudarbat, Brahim and Victor Chernoff. 2009. *The Determinants of Education-Job Match among Canadian University Graduates*. Discussion Paper Series. IZA DP No. 4513. http://ftp.iza.org/dp4513.pdf.

Boyd, Monica. 1984. *At a Disadvantage: The Occupational Attainments of Foreign Born Women in Canada*. International Migration Review 18(4):1091-1119.

Boyd, Monica. 1992. *Gender, Visible Minority and Immigrant Earnings Inequality: Reassessing Employment Equity Premise*. Vic Satzewch, ed., Deconstructing a Nation: Immigration, Multiculturalism & Racism in '90s Canada. Halifax: Fernwood Publishing, pp. 279-321.

Fertig, Michael and Stefanie Schurer. 2007. *Labour Market Outcomes of Immigrants in Germany: The Importance of Heterogeneity and Attrition Bias*. Discussion Paper Series. IZA DP No. 2915. http://ftp.iza.org/dp2915.pdf.

Forum of Labour Market Ministers (FLMM). 2009. *A Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*. Canada's Economic Action Plan. Catalogue number HS4-91/2009E-PDF. http://www.hrsdc.gc.ca/eng/workplaceskills/publications/fcr/pcf_folder/PDF/pcf.pdf.

Galarneau, Diane and René Morrisette. 2008. *Immigrants' education and required job skills*. Perspectives on labour and Income. Vol. 9 no. 12. Statistics Canada Catalogue number 75-001-X. http://statcan.gc.ca/pub/75-001-x/2008112/pdf/10766-eng.pdf.

Garcia-Espejo, Isabel and Marta Ibanez. 2006. *Education-Skill Matches and Labour Achievements among Graduates in Spain*. European Sociological Review, Vol. 22 No. 2 (pp.141-155).

Grayson, Paul J. 2004. *Social Dynamics, University Experiences, and Graduates' Job Outcome*. British Journal of Sociology of Education, Vol. 25, No. 5, (pp. 609-627).

Geschwender, James A. 1994. *Married women's waged labor and racial/ethnic stratification in Canada*. Canadian Ethnic Studies 26 (3): 53-73.

Heijke, H., C. Meng and C. Ris. 2003. *Fitting to the job: the role of generic and Vocational competencies in adjustment and performance*. Labour Economics, Vol. 10 (pp. 215-229).

Human Resources and Skills Development Canada. 2010. *Overview – Foreign Credential Recognition*. http://www.hrsdc.gc.ca/eng/workplaceskills/credential_recognition/overview.shtml (accessed August 6, 2010).

Krahn, Harvey and Jeffrey Bowlby. 1999. *Education job-skills match: An Analysis of the 1990 and 1995 National Graduates Surveys*. A Human Resources Development Canada Research paper, in collaboration with the Centre for Education Statistics. R-00-101E (85 pages).

Lautard, Hugh E. and Donald J. Loree. 1984. *Ethnic stratification in Canada, 1931-1971*. Canadian Journal of Sociology 9: 333-343.

Lautard, Hugh and Neil Guppy. 1999. *Revisiting the Vertical Mosaic: Occupational Stratification Among Canadian Ethnic Groups*, in Peter S. Li, ed., Race and Ethnic Relations in Canada, 2nd edition, Toronto: Oxford University Press, pp. 219-52.

Lochhead, Clarence. 2002. *Employment Sponsored Training among Recent Immigrants*. Canadian Labour and Business Centre. 15 pages. http://www.cspc.ca/files/Reports/Fitting_In/Training_among_Recent_Immigrants_-_WES.pdf.

Li, Peter S. 1988. *Ethnic Inequality in a Class Society*. Toronto: Wall and Thompson.

Li, Peter S. 1992. *Race and Gender as Bases of Class Fractions and Their Effects on Earnings*. Canadian Review of Sociology and Anthropology 29(4): 488-510.

Li, Peter S. 2000. *Earning Disparities between Immigrants and Native-Born Canadians*. Canadian Review of Sociology and Anthropology 37(3): 289–311.

Organisation for Economic Co-operation and Development (OECD). 2002. *OECD Employment Outlook*. July 2002.http://www.oecd.org/dataoecd/28/58/18960381.pdf.

Oreopoulos, Philip. 2008. *Why do Skilled Immigrants Struggle in the Labour Market: A Field Experiment with Six Thousand Résumés*. Economics Department, University of British Columbia.

Pendakur Krishna and Ravi Pendakur. 1998. *The Colour of Money: Earnings Differentials among Ethnic Groups in Canada*. Canadian Journal of Economics 31(3): 518-48.

Picot, Garnett and Feng Hou. 2009. *Seeking Success in Canada and the United States: The Determinants of Labour Market Outcomes Among the Children of Immigrants*. Canadian Labour Market and Skills Researcher Network. Working Paper No. 48. http://ideas.repec.org/p/ubc/clssrn/clsrn_admin-2009-63.html

Plante, Johanne. 2010. *Characteristics and Labour Market Outcomes of Internationally-Educated Immigrants*. Statistics Canada Catalogue number 81-595-M — No. 084. http://www.statcan.gc.ca/pub/81-595-m/81-595-m2010084-eng.htm.

Reitz, Jeffery. 2007. *Immigrant Employment Success in Canada, Part I: Individual and Contextual Causes*. Journal of International Migration and Integration 8:11-36.

Robst, John. 2007. *Education and Job Match: The Relatedness of College Major and Work*. Economics of Education Review, 26, (pp. 397–407).

Statistics Canada. 2007. *Immigration in Canada: A Portrait of the Foreign-born Population, 2006 Census*. Statistics Canada Catalogue number 97-557-XIE. http://www12.statcan.ca/english/census06/analysis/immcit/pdf/97-557-XIE2006001.pdf.

Statistics Canada. 2008a. *Educational Portrait of Canada, 2006 Census*. Statistics Canada Catalogue number 97-560-X. http://www12.statcan.gc.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf.

Statistics Canada. 2008b. *Canada's Ethnocultural Mosaic, 2006 Census*. Statistics Canada Catalogue number 97-562-X. http://www12.statcan.ca/census-recensement/2006/as-sa/97-562/pdf/97-562-XIE2006001.pdf.

Storen, Liv Anne and Clara Ase Arnesen. 2006. *What Promotes a Successful Utilization Of Competence in the Labour Market Five Years after Graduation? Does Vocational Higher Education Result in a Better Match than Academic Generalist Education?* Paper presented at the European Research Network on Transition in Youth – 2006 Workshop, Marseilles, 7–9 September 2006 (27 pages).

Witte, James C. and Arne L Kalleberg. 1995. *Matching Training and Jobs: The Fit Between Vocational Education and Employment in the German Labour Market*. European Sociological Review, Vol. 11 No. 3. (pp. 293-317).

Wolbers, Maareten H.J. 2003. *Job Mismatches and their Labour-Market Effects among School-Leavers in Europe*. European Sociological Review, Vol. 19 No. 3, (pp. 249-266).

Zeman, Klarka, Kathryn McMullen and Patrice de Broucker. 2010. *The High Education / Low Income Paradox: College and University Graduates with Low Earnings, Ontario, 2006*. Statistics Canada Catalogue number 81-595-M-No. 081. http://www.statcan.gc.ca/pub/81-595-m/81-595-m2010081-eng.htm.

Appendix 1

Regions and countries of highest postsecondary education

The following table outlines the detailed grouping of regions and countries of highest postsecondary education.

Census Question 31 "*In what province, territory or country did this person complete his/her highest degree, certificate or diploma*" was used to determine the country in which immigrants received their highest level of educational attainment greater than high school.

Internationally-educated includes all individuals aged 25 to 64 who completed their highest certificate, diploma or degree 'outside Canada,' while **Canadian-educated** includes all of those who reported receiving theirs 'in Canada.'

Table A.1.1

Detailed grouping of regions and countries of highest postsecondary education

High-level and detailed regions of highest postsecondary education	Countries / Provinces of highest postsecondary education
Canadian-educated	
Canada	Newfoundland and Labrador
	Prince Edward Island
	Nova Scotia
	New Brunswick
	Quebec
	Ontario
	Manitoba
	Saskatchewan
	Alberta
	British Columbia
	Yukon
	Northwest Territories
	Nunavut
Internationally-educated	
North America	United States of America
	Other North America[1]
Central America	Belize
	Costa Rica
	El Salvador
	Guatemala
	Honduras
	Mexico
	Nicaragua
	Panama

Table A.1.1 (continued)

Detailed grouping of regions and countries of highest postsecondary education

High-level and detailed regions of highest postsecondary education	Countries / Provinces of highest postsecondary education
Caribbean and Bermuda	Antigua and Barbuda
	Barbados
	Bermuda
	Cuba
	Dominica
	Dominican Republic
	Grenada
	Haiti
	Jamaica
	Saint Kitts and Nevis
	Saint Lucia
	Saint Vincent and the Grenadines
	Trinidad and Tobago
	Other Caribbean and Bermuda[2]
South America	Argentina
	Bolivia
	Brazil
	Chile
	Columbia
	Ecuador
	Guyana
	Paraguay
	Peru
	Suriname
	Uruguay
	Venezuela
	Other South America[3]
Europe	
Western Europe	Austria
	Belgium
	France
	Germany
	Netherlands
	Switzerland
	Other Western Europe[4]
Eastern Europe	Bulgaria
	Czech Republic
	Slovakia
	Czechoslovakia (n.o.s.)
	Hungary
	Poland
	Romania
	Estonia
	Latvia
	Lithuania
	Belarus
	Republic of Moldova
	Russian Federation
	Ukraine
	USSR (n.o.s.)
Northern Europe	Ireland (EIRE)
	Denmark (includes Faroe Islands)
	Finland
	Iceland
	Norway (includes Svalbard and Jan Mayen Islands)
	Sweden
	United Kingdom

Table A.1.1 (continued)

Detailed grouping of regions and countries of highest postsecondary education

High-level and detailed regions of highest postsecondary education	Countries / Provinces of highest postsecondary education
Southern Europe	Albania
	Greece
	Italy
	Malta
	Portugal
	Spain
	Bosnia and Herzegovina
	Croatia
	Macedonia
	Serbia and Montenegro
	Slovenia
	Yugoslavia (n.o.s.)
	Other Southern Europe[5]
Other Europe	
	Africa
Western Africa	Côte d'Ivoire
	Ghana
	Guinea
	Nigeria
	Senegal
	Sierra Leone
	Other Western Africa[6]
Eastern Africa	Burundi
	Eritrea
	Ethiopia
	Kenya
	Madagascar
	Mauritius
	Rwanda
	Somalia
	United Republic of Tanzania
	Uganda
	Zambia
	Zimbabwe
	Other Eastern Africa[7]
Northern Africa	Algeria
	Egypt
	Libya
	Morocco
	Sudan
	Tunisia
Central Africa	Angola
	Cameroon
	Democratic Republic of the Congo
	Other Central Africa[8]
Southern Africa	Republic of South Africa
	Other Southern Africa[9]
Other Africa	
	Asia
West Central Asia and the Middle East	Afghanistan
	Cyprus
	Iran
	Iraq
	Israel
	Jordan
	Kuwait
	Lebanon
	Palestine

Table A.1.1 (concluded)

Detailed grouping of regions and countries of highest postsecondary education

High-level and detailed regions of highest postsecondary education	Countries / Provinces of highest postsecondary education
	Asia
West Central Asia and the Middle East	Saudi Arabia Syria United Arab Emirates Turkey Kazakhstan Uzbekistan Armenia Azerbaijan Other West Central Asia and the Middle East[10]
Eastern Asia	People's Republic of China (including China) Special Administrative Region of Hong Kong Special Administrative Region of Macau Japan South Korea (including Korea) Taiwan Other Eastern Asia[11]
Southeast Asia	Brunei Darussalam Cambodia Indonesia Laos Malaysia Myanmar Philippines Singapore Thailand Viet Nam
Southern Asia	Bangladesh India Nepal Pakistan Sri Lanka Other Southern Asia[12]
Oceania	Australia Fiji New Zealand Other Oceania[13]
Other outside Canada	
Distance learning[14]	

1. Other North America includes Greenland and Saint Pierre and Miquelon.
2. Other Caribbean and Bermuda category includes Anguilla, Aruba, Bahamas, Cayman Islands, Guadeloupe, Martinique, Montserrat, Netherlands Antilles, Puerto Rico, Virgin Islands, British, Virgin Islands, U.S. and Other Caribbean.
3. Other South America category includes French Guiana and Other South America.
4. Other Western Europe category includes Liechtenstein, Luxembourg and Monaco.
5. Other Southern Europe category includes Gibraltar and Holy See (Vatican City).
6. Other Western Africa category includes Benin, Burkina Faso, Cape Verde, Gambia, Guinea-Bissau, Liberia, Mali, Mauritania, Niger and Togo.
7. Other Eastern Africa category includes Comoros, Djibouti, Malawi, Mozambique, Réunion and Seychelles.
8. Other Central Africa category includes Central African Republic, Chad, Republic of the Congo and Gabon.
9. Other Southern Africa category includes Botswana, Lesotho, Namibia and Swaziland.
10. Other West Central Asia and the Middle East category includes Bahrain, Oman, Qatar, Yemen, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan.
11. Other Eastern Asia category includes North Korea and Mongolia.
12. Other Southern Asia category includes West Bank and Gaza Strip.
13. Other Oceania category includes Nauru, New Caledonia, Papua New Guinea and Tonga.
14. Internationally-educated includes distance learning.

Appendix 2

List of targeted occupations

The following tables outline the targeted occupations as identified by the FCR Program at HRSDC using the 2006 National Occupational Classification – Statistics (NOC-S 2006).

The FCR Program at HRSDC is to develop a coherent, transparent, fair, accessible and rigorous foreign credential assessment and recognition process that would enhance labour market outcomes of internationally-educated immigrants in targeted occupations and sectors of activities.

Table A.2.1

Top regulated occupations as identified by the FCR Program at HRSDC

NOC-S	Occupations
C03-C04[1,2]	Engineers
C073	Software engineers and designers
C13-C14[1]	Engineering technicians
B011	Financial auditors and accountants
E13	Secondary and elementary school teachers and educational counsellors
D011-D012[1]	Physicians
F025	Translators, terminologists and interpreters
D031	Pharmacists
C023	Agricultural representatives, consultants and specialists
D11[3]	Nurse supervisors and registered nurses
D233	Licensed practical nurses
D211	Medical laboratory technologists and pathologists' assistant
C051	Architects
C013	Geologists, geochemists and geophysicists
D014	Veterinarians
E012	Lawyers and Quebec notaries
D013	Dentists
D22	Technical occupations in dental health care
D311	Dental assistants
D042	Physiotherapists
E022	Social workers
E034	Social policy researchers, consultants and program officers
E021	Psychologists
D215	Medical radiation technologists
C053	Urban and land use planners
C022	Forestry professionals

1. Not a standard NOC-S category.
2. Skilled immigrants are concentrated in civil engineers (C031), mechanical engineers (C032) and in electrical and electronics engineers (C033).
3. Skilled immigrants are concentrated in registered nurses (D112).

Table A.2.2

Top non-regulated occupations as identified by the FCR Program at HRSDC

NOC-S	Occupations
C071+C072+C074+C075+C181[1,2,3]	Computer programmers and related occupations
E112	Post-secondary teaching and research assistants
B022	Professional occupations in business services to management
A13	Sales, marketing and advertising managers
G121	Technical sales specialists, wholesale trade
B012	Financial and investment analysts
E033	Business development officers and marketing researchers and consultants
C012	Chemists
A111	Financial managers
E111	University professors
C021	Biologists and related scientists
B211	Secretaries (except legal and medical)
B311	Administrative officers
A302	Banking, credit and other investment managers
E121	College and other vocational instructors
B315	Purchasing agents and officers
A122	Computer and information system managers
E032	Economists and economic policy researchers and analysts
B313	Personnel and recruitment officers
G111	Sales representatives, wholesale trade (non-technical)
C111	Chemical technologists and technicians
E211	Paralegal and related occupations
B312	Executive assistants
A211	Retail trade managers
C061	Mathematicians, statisticians and actuaries
F141	Graphic designers and illustrators
B531	Accounting and related clerks
C011	Physicists and astronomers
F022	Editors
B014	Other financial officers
A121	Engineering managers
E038	Other professional occupations in social science, n.e.c.
B021	Specialists in human resources
A114	Other administrative services managers
F023	Journalists
C121	Biological technologists and technicians
A112	Human resources managers
B511	General office clerks
F011	Librarians
E212	Community and social service workers
E035	Education policy researchers, consultants and program officers
C015	Other professional occupations in physical sciences

1. Not a standard NOC-S category.
2. Skilled immigrants are concentrated in information systems analysts and consultants (C071).
3. Includes computer network technicians (C181) and excludes software engineers and designers (C073).

Table A.2.3
Top regulated trades as identified by the FCR Program at HRSDC

NOC-S	Occupations
G411	Chefs
G412	Cooks
H212	Industrial electricians
H311	Machinists and machining and tooling inspectors
H312	Tool and die maker
H421	Automotive service technicians, truck and bus mechanics and mechanical repairers
A371	Construction managers
H214	Electrical power line and cable workers
H326	Welders and related machine operators
H211	Electricians (except industrial and power system)
H121	Carpenters
G911	Hairstylists and barbers
H412	Heavy-duty equipment mechanics
H411	Construction millwrights and industrial mechanics (except textile)

Appendix 3

Concordance between instructional programs and targeted occupations

In order to determine if an individual is working in the corresponding field of study or not, the first step undertaken by the Center for Education Statistics at Statistics Canada was to develop a concordance file between "instructional programs" and "identified occupations" using the 2006 Census distribution of Canadian-educated individuals aged 25 to 64.

The instructional programs leading to the targeted occupations as identified by the FCR Program at HRSDC were selected based on the best possible match between a given occupation and the instructional program using the 2001 Classification of Instructional Programs (CIP) and the 2006 National Occupational Classification – Statistics (NOC-S).

For most regulated occupations and regulated trades, the selection of a specific instructional program was obvious to find as, for a majority of them, there was a clear relationship between educational credentials and the ability to meet the requirements to work in the associated occupation.

In the case of non-regulated occupations, however, the selection of a specific instructional program was not as obvious. Given the nature of these occupations, the relationship between field of study and occupation is not as definite. In fact, unregulated occupations often draw on workers from various fields of study (workers in administration present, for example, different educational and personal background and the selection of a unique instructional program leading to this occupation was almost impossible).

The following table presents the best possible matches between an instructional program and the occupations identified by the FCR Program at HRSDC using the 2006 Census distribution of Canadian-educated individuals aged 25 to 64.

Table A.3.1

Concordance between instructional programs and targeted occupations (regulated occupations (R), non-regulated occupations (NR) and regulated trades (RT))

Instructional programs		Targeted occupations	
CIP	Name	NOC-S	Name
01.00 01.11	Agriculture, general Plant sciences	C023	Agricultural representatives, consultants and specialists (R)
03.05	Forestry	C022	Forestry professionals (R)
04.02	Architecture (BArch, BA / BSc, MArch, MA / MSc, PhD)	C051	Architects (R)
04.03	City / urban, community and regional planning	C053	Urban and land use planners (R)
04.06	Geological and earth sciences / geosciences	C013	Geologists, geochemists and geophysicists (R)
09.04	Journalism	F023 F022	Journalists (NR) Editors (NR)
11.01 11.02 11.03 11.04 11.05 11.07 11.08 11.09 11.10 11.99	Computer and information sciences and support services, general Computer programming Data processing and data processing technology / technician Information science / studies Computer systems analysis / analyst Computer science Computer software and media applications Computer systems networking and telecommunications Computer / information technology administration and management Computer and information sciences and support services, other	A122 C07 C181	Computer and information system managers (NR) Computer and information systems professionals[1] (NR) Computer network technicians (NR)
12.04	Cosmetology and related personal grooming services	G911	Hairstylists and barbers (RT)
12.05	Culinary arts and related services	G411 G412	Chefs (RT) Cooks (RT)
13.01 13.10 13.11 13.12 13.13	Education, general Special education and teaching Student counselling and personnel services Teacher education and professional development, specific levels and methods Teacher education and professional development, specific subject areas	E13 E035 E111 E121	Secondary and elementary school teachers and educational counsellors[2] (R) Education policy researcher, consultants and program officers (NR) University professors (NR) College and other vocational instructors (NR)
14.00	Engineering[3]	C03 + C04 C073 A121	Engineers[4] (R) Software engineers and designers (R) Engineering managers (R)
15.00	Engineering technologies / technicians programs[5]	C13 + C14	Engineering technicians[6] (R)
16.01	Linguistic, comparative and related language studies and services	F025	Translators, terminologists and interpreters (R)
22.01 22.02	Law (LLB, JD, BCL) Legal research and advanced professional studies (Post-LLB / JD)	E012	Lawyers and Quebec notaries (R)
22.03 22.99	Legal support services Legal professions and studies, other	E211	Paralegal and related occupations (NR)
25.01	Library science / librarianship	F011	Librarians (NR)
26.01	Biology, general	C021 C121	Biologists and related scientists (NR) Biological technologists and technicians (NR)

Table A.3.1 (continued)

Concordance between instructional programs and targeted occupations (regulated occupations (R), non-regulated occupations (NR) and regulated trades (RT))

Instructional programs		Targeted occupations	
CIP	Name	NOC-S	Name
40.05	Chemistry	C012	Chemists (NR)
40.08	Physics	C011	Physicists and astronomers (NR)
41.03	Physical science technologies / technicians	C111	Chemical technologists and technicians (NR)
42.01 42.02	Psychology, general Clinical psychology	E021	Psychologists (R)
44.07	Social work	E022 E034 E212	Social workers (R) Social policy researchers, consultants and program officers (R) Community and social service workers (NR)
45.06	Economics	E032	Economists and economic policy researchers and analysts (NR)
46.02	Carpentry / carpenter	H121 A371	Carpenters (RT) Construction managers (RT)
46.03	Electrical and power transmission installers	H211 H212 H214	Electricians (except industrial and power system) (RT) Industrial electricians (RT) Electrical power line and cable workers (RT)
47.03	Heavy / industrial equipment maintenance technologies	H411 H412	Construction millwrights and industrial mechanics (except textile) (RT) Heavy-duty equipment mechanics (RT)
47.06	Vehicle maintenance and repair technologies	H421	Automotive service technicians, truck and bus mechanics and mechanical repairers (RT)
48.05	Precision metal working	H326 H311 H312	Welders and related machine operators (RT) Machinists and machining and tooling inspectors (RT) Tool and die maker (RT)
50.04	Design and applied arts	F141	Graphic designers and illustrators (NR)
51.04 60.01	Dentistry (DDS, DMD) Dental residency programs	D013	Dentists (R)
51.06	Dental support services and allied professions	D22 D311	Technical occupations in dental health care[7] (R) Dental assistants (R)
51.09	Allied health diagnostic, intervention and treatment professions	D215	Medical radiation technologists (R)
51.10	Clinical / medical laboratory science and allied professions	D211	Medical laboratory technologists and pathologists' assistant (R)
51.12 60.02	Medicine (MD) Medical residency programs	D011 + D012	Physicians[8] (R)
51.16	Nursing	D11 D233	Nurse supervisors and registered nurses[9] (R) Licensed practical nurses (R)
51.20	Pharmacy, pharmaceutical sciences and administration	D031	Pharmacists (R)
51.23	Rehabilitation and therapeutic professions	D042	Physiotherapists (R)
51.24 60.03	Veterinary medicine (DVM) Veterinary residency programs	D014	Veterinarians (R)

Table A.3.1 (concluded)

Concordance between instructional programs and targeted occupations (regulated occupations (R), non-regulated occupations (NR) and regulated trades (RT))

Instructional programs		Targeted occupations	
CIP	Name	NOC-S	Name
52.01	Business / commerce, general	A114	Other administrative services managers (NR)
52.02	Business administration, management and operations	A13	Sales, marketing and advertising managers (NR)
		A211	Retail trade managers (NR)
52.14	Marketing	B022	Professional occupations in business services to management (NR)
		E033	Business development officers and marketing researchers and consultants (NR)
		B315	Purchasing agent and officers (NR)
		G111	Sales representatives, wholesale trade (non-technical) (NR)
		G121	Technical sales specialists, wholesale trade (NR)
52.03	Accounting and related services	B011	Financial auditors and accountants (R)
52.08	Finance and financial management services	B012	Financial and investment analysts (NR)
		B014	Other financial officers (NR)
		A111	Financial managers (NR)
		A302	Banking, credit and other investment managers (NR)
		B531	Accounting and related clerks (NR)
52.04	Business operations support and assistant services	B211	Secretaries (except legal and medical) (NR)
		B311	Administrative officers (NR)
		B312	Executive assistants (NR)
		B511	General office clerks (NR)
52.10	Human resources management and services	B021	Specialists in human resources (NR)
		A112	Human resources managers (NR)
		B313	Personnel and recruitment officers (NR)
52.13	Management sciences and quantitative methods	C061	Mathematicians, statisticians and actuaries (NR)
No specific instructional program leads to the following occupations.		C015	Other professional occupations in physical sciences (NR)
		E038	Other professional occupations in social sciences, n.e.c. (NR)
		E112	Post-secondary teaching, and research assistants (NR)

1. Computer and information systems professionals include: Information systems analysts and consultants, database analysts and data administrators, software engineers and designers, computer programmers and interactive media developers, and web designers and developers.
2. Secondary and elementary school teachers and educational counsellors include secondary school teachers, elementary school and kindergarten teachers, and educational counsellors.
3. Engineering programs include: Engineering, general, aerospace, aeronautical and astronautical engineering, agricultural / biological engineering and bioengineering, architectural engineering, biomedical / medical engineering, ceramic sciences and engineering, chemical engineering, civil engineering, computer engineering, electrical, electronics and communications engineering, engineering mechanics, engineering physics, engineering science, environmental / environmental health engineering, materials engineering, mechanical engineering, metallurgical engineering, mining and mineral engineering, naval architecture and marine engineering, nuclear engineering, ocean engineering, petroleum engineering, systems engineering, textile sciences and engineering, materials science, polymer / plastics engineering, construction engineering, forest engineering, industrial engineering, manufacturing engineering, operations research, surveying engineering, geological / geophysical engineering, and engineering, other.
4. Engineers include civil, mechanical, electrical and chemical engineers and other engineers.
5. Engineering technologies / technicians programs include: Technical occupations in civil, mechanical and industrial engineering and technical occupations in electronics and electrical engineering.
6. Engineering technicians include technical occupations in civil, mechanical and industrial engineering and technical occupations in electronics and electrical engineering.
7. Technical occupations in dental health care include denturists, dental hygienists and dental therapists, and dental technologists, technicians and laboratory bench workers.
8. Physicians include specialist physicians and general practitioners and family physicians.
9. Nurse supervisors and registered nurses include head nurses and supervisors and registered nurses.

Appendix 4

National Occupational Classification Matrix and the classification of occupations by skill levels and skill types

The following table is an adaptation of the *National Occupational Classification Matrix* developed by HRSDC in 2006 (i.e., concordance from the National Occupational Classification (NOC) used by HRSDC to the National Occupational Classification – Statistics (NOC-S) used by Statistics Canada). It provides an overview of the entire occupational classification structure based on "skill levels" and "skill types". Please follow this link to access the original NOC Matrix 2006 as developed by HRSDC: http://www5.hrsdc.gc.ca/NOC/English/NOC/2006/pdf/Matrix.pdf.

Table A.4.1

Classification of occupations by skill level and skill type, NOC-S 2006

Skill type	Major group of occupations	Occupations (NOC-S 2006)	Skill level
All occupational categories	Senior management occupations	A01 – Legislators and senior management	Management occupations
Business, finance and administration occupations	Management occupations in business, finance and administration	A11 – Administrative services managers A30 – Managers in financial and business services A31 – Managers in communication (except broadcasting)	Management occupations
	Professional occupations in business and finance	B01 – Auditors, accountants and investment professionals B02 – Human resources and business service professionals	Skill level A
	Skilled administrative and business occupations	B41 – Clerical supervisors B31 – Administrative and regulatory occupations B11 – Finance and insurance administrative occupations B21 – Secretaries, recorders and transcriptionists	Skill level B
	Clerical occupations	B51 – Clerical occupations, general office skills B52 – Office equipment operators B53 – Finance and insurance clerk B54 – Administrative support clerks B55 – Library, correspondence and related information clerks B56 – Mail and message distribution occupations B57 – Recording, scheduling and distributing occupations	Skill level C
Natural and applied sciences and related occupations	Management occupations in natural and applied sciences	A12 – Managers in engineering, architecture, science and information systems	Management occupations
	Professional occupations in natural and applied sciences	C01 – Physical science professionals C02 – Life science professionals C03 – Civil, mechanical, electrical and chemical engineers C04 – Other engineers C05 – Architects, urban planners and land surveyors C06 – Mathematicians, statisticians and actuaries C07 – Computer and information systems professionals	Skill level A

Table A.4.1 (continued)

Classification of occupations by skill level and skill type, NOC-S 2006

Skill type	Major group of occupations	Occupations (NOC-S 2006)	Skill level
Natural and applied sciences and related occupations	Technical occupations related to natural and applied sciences	C11 – Technical occupations in physical sciences C12 – Technical occupations in life sciences C13 – Technical occupations in civil, mechanical and industrial engineering C14 – Technical occupations in electronics and electrical engineering C15 – Technical occupations in architecture, drafting, surveying and mapping C16 – Other technical inspectors and regulatory officers C17 – Transportation officers and controllers C18 – Technical occupations in computer and information systems	Skill level B
Health occupations and occupations in social science, education, government service and religion	Managers in health, social science, education, government service and religion	A32 – Managers in health, education, social and community services A33 – Managers in public administration	Management occupations
Health occupations	Professional occupations in health	D01 – Physicians, dentists and veterinarians D02 – Optometrists, chiropractors and other health diagnosing and treating professionals D03 – Pharmacists, dietitians and nutritionists D04 – Therapy and assessment professionals D11 – Nurse supervisors and registered nurses	Skill level A
	Technical and skilled occupations in health	D21 – Medical technologists and technicians (except dental health) D22 – Technical occupations in dental health care D23 – Other technical occupations in health care (except dental)	Skill level B
	Assisting occupations in support of health services	D31 – Assisting occupations in support of health services	Skill level C
Occupations in social science, education, government service and religion	Professional occupations in social science, education, government services and religion	E01 – Judges, lawyers and Quebec notaries E11 – University professors and assistants E12 – College and other vocational instructors E13 – Secondary and elementary school teachers and educational counsellors E02 – Psychologists, social workers, counsellors, clergy and probation officers E03 – Policy and program officers, researchers and consultants	Skill level A
	Paraprofessional occupations in law, social services, education and religion	E21 – Paralegals, social services workers and occupations in education and religion, n.e.c.	Skill level B
Occupations in arts, culture, recreation and sport	Management occupations in arts, culture, recreation and sport	A34 – Managers in Art, Culture, Recreation and Sport	Management occupations
	Professional occupations in art and culture	F01 – Librarians, archivists, conservators and curators F02 – Writing, translating and public relations professionals F03 – Creative and performing artists	Skill level A
	Technical and skilled occupations in art, culture, recreation and sport	F11 – Technical occupations in libraries, archives, museums and art galleries F12 – Photographers, graphic arts technicians and technical and co-ordinating occupations in motion pictures, broadcasting and the performing arts F13 – Announcers and other performers F14 – Creative designers and craftspersons F15 – Athletes, coaches, referees and related occupations	Skill level B

Table A.4.1 (continued)

Classification of occupations by skill level and skill type, NOC-S 2006

Skill type	Major group of occupations	Occupations (NOC-S 2006)	Skill level
Sales and service occupations	Management occupations in sales and service	A13 – Sales, marketing and advertising managers A21 – Managers in retail trade A22 – Managers in food service and accommodation A35 – Managers in protective service A36 – Managers in other services	Management occupations
	Skilled sales and service occupations	G01 – Sales and service supervisors G12 – Technical sales specialists, wholesale trade G13 – Insurance and real estate sales occupations and buyers G41 – Chefs and cooks G61 – Police officers and firefighters G91 – Technical occupations in personal service	Skill level B
	Intermediate sales and service occupations	G11 – Sales representatives, wholesale trade G21 – Retail salespersons and sales clerks G71 – Occupations in travel and accommodation G72 – Tour and recreational guides and casino occupations G51 – Occupations in food and beverage service G62 – Other occupations in protective service G81 – Childcare and home support workers G92 – Other occupations in personal service	Skill level C
	Elemental sales and service occupations	G31 – Cashiers G97 – Other sales and related occupations G96 – Food counter attendants, kitchen helpers and related occupations G63 – Security guards and related occupations G93 – Cleaners G73 – Other occupations in travel, accommodation, amusement and recreation G98 – Other elemental service occupations	Skill level D
Trades, transport and equipment operators and related occupations	Management occupations in trades, transport and equipment operation	A37 – Managers in construction and transportation A14 – Facility operation and maintenance managers	Management occupations
	Trades and skilled transport and equipment operators	H01 – Contractors and supervisors, trades and related workers H02 – Supervisors, railway and motor transportation occupations H31 – Machinists and related occupations H21 – Electrical trades and telecommunication occupations H11 – Plumbers, pipefitters and gas fitters H32 – Metal forming, shaping and erecting trades H12 – Carpenters and cabinetmakers H13 – Masonry and plastering trades H14 – Other construction trades H41 – Machinery and transportation equipment mechanics (except motor vehicle) H42 – Automotive service technicians H43 – Other mechanics H51 – Upholsterers, tailors, shoe repairers, jewellers and related occupations H22 – Stationary engineers and power station and system operators H72 – Train crew operating occupations H62 – Crane operators, drillers and blasters H52 – Printing press operators, commercial divers and other trades and related occupations, n.e.c.	Skill level B
	Intermediate occupations in transport, equipment operation, installation and maintenance	H71 – Motor vehicle and transit drivers H61 – Heavy equipment operators H73 – Other transport equipment operators and related workers H53 – Other installers, repairers and servicers H81 – Longshore workers and material handlers	Skill level C
	Trades helpers, construction labourers and related occupations	H82 – Trades helpers and labourers H83 – Public works and other labourers, n.e.c.	Skill level D

Table A.4.1 (concluded)

Classification of occupations by skill level and skill type, NOC-S 2006

Skill type	Major group of occupations	Occupations (NOC-S 2006)	Skill level
Occupations unique to primary industry	Management occupations in primary industry	A38 – Managers in primary production (except agriculture)	Management occupations
	Skilled occupations in primary industry	I11 – Supervisors, logging and forestry I12 – Supervisors, mining, oil and gas I13 – Underground miners, oil and gas drillers and related workers I15 – Logging machinery operators I01 – Contractors, operators and supervisors in agriculture, horticulture and aquaculture I17 – Fishing vessel masters and skippers and fishermen / women	Skill level B
	Intermediate occupations in primary industry	I14 – Mine service workers and operators in oil and gas drilling I16 – Logging and forestry workers I02 – Agriculture and horticulture workers I18 – Other fishing and trapping occupations	Skill level C
	Labourers in primary industry	I21 – Primary production labourers	Skill level D
Occupations unique to processing, manufacturing and utilities	Management occupations in processing, manufacturing and utilities	A39 – Managers in manufacturing and utilities	Management occupations
	Processing, manufacturing and utilities supervisors and skilled operators	J01 – Supervisors, processing occupations J02 – Supervisors, assembly and fabrication J11 – Central control and process operators in manufacturing and processing	Skill level B
	Processing and manufacturing machine operators and assemblers	J12 – Machine operators and related workers in metal and mineral products processing J13 – Machine operators and related workers in chemical, plastic and rubber processing J14 – Machine operators and related workers in pulp and paper production and wood processing J15 – Machine operators and related workers in textile processing J16 – Machine operators and related workers in fabric, fur and leather products manufacturing J17 – Machine operators and related workers in food, beverage and tobacco processing J18 – Printing machine operators and related occupations J21 – Mechanical, electrical and electronics assemblers J22 – Other assembly and related occupations J19 – Machining, metalworking, woodworking and related machine operators	Skill level C
	Labourers in processing, manufacturing and utilities	J31 – Labourers in processing, manufacturing and utilities	Skill level D

Notes: Skill level A corresponds to occupations that usually require university education.
Skill level B corresponds to occupations that usually require college education or apprenticeship training.
Skill level C corresponds to occupations that usually require secondary school and/or occupation-specific training.
Skill level D corresponds to occupations for which on-the-job training is usually provided.

Source: National Occupational Classification Matrix 2006, HRSDC (http://www5.hrsdc.gc.ca/NOC/English/NOC/2006/pdf/Matrix.pdf).

Appendix 5

Odds ratios for working in the best corresponding or equivalent occupations

The following table shows how the addition of a series of variables modify the likelihood of working in the best corresponding or equivalent occupation among immigrant paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

The first column presents the likelihood of having a good education-job skills match for immigrant paid workers compared to Canadian-born paid workers with a postsecondary education by period of landing and region of education. These additional variables, which could have an influence on the employment outcome of immigrants into the Canadian labour market, are: sex and age group, marital status and presence of children, level of education and major instructional program, province, territory and area of residence, language ability, visible minority status and the full/part-time and full/part-year status of employment.

Table A.5.1

Adjusted odds ratios for working in the best corresponding or equivalent occupations among immigrant paid workers aged 25 to 64 by period of landing and region of education, Canada, 2006

Effect	Immigrant status by period of landing by region of education	Sex and age group	Marital status and presence of children	Level of education and major instructional program	Province, territory and area of residence	Language ability status	Visible minority status	Full/part-time and full/part-year status of employment
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
	odds ratio							
Canadian-born with a postsecondary education[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Very-recent immigrants								
Educated in Canada	0.72***	0.72***	0.71***	0.68***	0.66***	0.67***	0.84***	0.90**
Educated in North America	0.86**	0.83**	0.79***	0.71***	0.68***	0.69***	0.82**	0.89*
Educated in Latin America	0.27***	0.26***	0.25***	0.23***	0.22***	0.23***	0.29***	0.32***
Educated in Western Europe	0.75***	0.72***	0.70***	0.68***	0.69***	0.67***	0.71***	0.77***
Educated in Eastern Europe	0.26***	0.25***	0.24***	0.20***	0.19***	0.20***	0.19***	0.21***
Educated in Northern Europe	0.87**	0.83**	0.78***	0.74***	0.71***	0.72***	0.79***	0.85**
Educated in Southern Europe	0.27***	0.26***	0.24***	0.22***	0.21***	0.21***	0.21***	0.23***
Educated in Africa	0.28***	0.26***	0.25***	0.22***	0.21***	0.21***	0.26***	0.30***
Educated in West Central Asia and the Middle East	0.39***	0.37***	0.36***	0.31***	0.29***	0.30***	0.36***	0.41***
Educated in Eastern Asia	0.26***	0.25***	0.24***	0.21***	0.20***	0.22***	0.30***	0.33***
Educated in Southeast Asia	0.14***	0.14***	0.13***	0.10***	0.09***	0.10***	0.13***	0.14***
Educated in Southern Asia	0.21***	0.20***	0.18***	0.16***	0.15***	0.15***	0.21***	0.23***
Educated in Oceania	0.83	0.82	0.77**	0.71**	0.68**	0.70**	0.79*	0.84
Recent immigrants								
Educated in Canada	0.72	0.71	0.71	0.68	0.66	0.67	0.84	0.90
Educated in North America	0.86	0.83	0.79	0.71	0.68	0.69	0.82	0.89
Educated in Latin America	0.31*	0.30*	0.29*	0.28**	0.27**	0.27**	0.35**	0.32
Educated in Western Europe	0.75	0.72	0.70	0.68	0.69	0.67	0.71	0.77
Educated in Eastern Europe	0.47***	0.46***	0.44***	0.39***	0.37***	0.37***	0.37***	0.38***
Educated in Northern Europe	1.12**	1.06**	1.02**	0.97**	0.93**	0.94**	1.06**	1.08**
Educated in Southern Europe	0.27	0.26	0.24	0.22	0.21	0.21	0.21	0.23
Educated in Africa	0.49***	0.47***	0.45***	0.39***	0.38***	0.38***	0.46***	0.48***
Educated in West Central Asia and the Middle East	0.39	0.37	0.36	0.31	0.29	0.30	0.36	0.41
Educated in Eastern Asia	0.43***	0.42***	0.39***	0.36***	0.34***	0.36***	0.49***	0.51***
Educated in Southeast Asia	0.15*	0.15*	0.14*	0.11**	0.11**	0.11**	0.15**	0.14
Educated in Southern Asia	0.29***	0.28***	0.25***	0.22***	0.21***	0.22***	0.30***	0.31***
Educated in Oceania	0.83	0.82	0.77	0.70	0.68	0.69	0.79	0.84
Established immigrants								
Educated in Canada	0.92***	0.92***	0.92***	0.91***	0.87***	0.87***	1.02***	1.02**
Educated in North America	1.02**	1.02**	1.00***	0.88**	0.85**	0.86**	0.97**	0.89
Educated in Latin America	0.32**	0.32***	0.32***	0.32***	0.31***	0.31***	0.41***	0.40***
Educated in Western Europe	0.75	0.72	0.70	0.78*	0.69	0.67	0.71	0.77
Educated in Eastern Europe	0.43***	0.42***	0.41***	0.38***	0.36***	0.36***	0.36***	0.35***
Educated in Northern Europe	1.14***	1.13***	1.11***	1.08***	1.03***	1.03***	1.11***	1.12***
Educated in Southern Europe	0.59***	0.57***	0.55***	0.55***	0.52***	0.52***	0.52***	0.52***
Educated in Africa	0.59***	0.58***	0.56***	0.54***	0.52***	0.51***	0.63***	0.63***
Educated in West Central Asia and the Middle East	0.45**	0.44**	0.43**	0.40***	0.39***	0.38**	0.45**	0.41
Educated in Eastern Asia	0.50***	0.50***	0.48***	0.47***	0.44***	0.46***	0.64***	0.65***
Educated in Southeast Asia	0.19***	0.20***	0.19***	0.16***	0.15***	0.15***	0.21***	0.20***
Educated in Southern Asia	0.28***	0.27***	0.25***	0.23***	0.22***	0.22***	0.30***	0.30***
Educated in Oceania	0.83	0.82	0.77	0.70	0.68	0.69	0.79	0.84

* $p \leq 0.05$
** $p \leq 0.01$
*** $p \leq 0.001$
1. Reference category.
Note: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Appendix 6

Odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential

The following table shows how the addition of a series of variables modify the likelihood of having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year immigrant paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

The first column presents the likelihood of having a good education-employment earnings match for full-time full-year immigrant paid workers compared to full-time full-year Canadian-born paid workers with a postsecondary education by period of landing and region of education. The other columns each present new adjusted odds ratios after controlling for certain variables. These additional variables, which could have an influence on the employment outcome of immigrants into the Canadian labour market, are: sex and age group, marital status and presence of children, level of education and major instructional program, province, territory and area of residence, language ability and visible minority status.

Table A.6.1

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year immigrant paid workers aged 25 to 64 by period of landing and region of education, Canada, 2006

Effect	Immigrant status by period of landing by region of education	Sex and age group	Marital status and presence of children	Level of education and major instructional program	Province, territory and area of residence	Language ability status	Visible minority status
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
	odds ratio						
Canadian-born with a postsecondary education[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Very-recent immigrants							
Educated in Canada	0.55***	0.65***	0.64***	0.57***	0.52***	0.51***	0.59***
Educated in North America	0.86	0.89	0.86	0.67***	0.58***	0.58***	0.64***
Educated in Latin America	0.27***	0.29***	0.28***	0.24***	0.22***	0.22***	0.25***
Educated in Western Europe	0.55***	0.60***	0.58***	0.50***	0.55***	0.54***	0.56***
Educated in Eastern Europe	0.28***	0.29***	0.28***	0.21***	0.19***	0.19***	0.19***
Educated in Northern Europe	0.87	0.89	0.86	0.77**	0.67**	0.68***	0.71**
Educated in Southern Europe	0.28***	0.28***	0.27***	0.22***	0.19***	0.19***	0.19***
Educated in Africa	0.39***	0.40***	0.39***	0.31***	0.31***	0.31***	0.35***
Educated in West Central Asia and the Middle East	0.28***	0.29***	0.28***	0.21***	0.18***	0.18***	0.20***
Educated in Eastern Asia	0.23***	0.23***	0.22***	0.17***	0.15***	0.15***	0.18***
Educated in Southeast Asia	0.24***	0.25***	0.24***	0.17***	0.14***	0.15***	0.17***
Educated in Southern Asia	0.28***	0.29***	0.28***	0.21***	0.17***	0.18***	0.21***
Educated in Oceania	1.51**	1.72**	1.66**	1.34	1.18	1.18	1.26
Recent immigrants							
Educated in Canada	0.55	0.65	0.64	0.57	0.51	0.51	0.59
Educated in North America	0.86	0.89	0.86	0.67	0.58	0.58	0.64
Educated in Latin America	0.50***	0.48**	0.48**	0.41**	0.36**	0.36**	0.42**
Educated in Western Europe	0.74*	0.60	0.58	0.50	0.55	0.54	0.56
Educated in Eastern Europe	0.58***	0.55***	0.53***	0.41***	0.36***	0.36***	0.35***
Educated in Northern Europe	0.87	0.89	0.86	0.77	0.67	0.67	0.71
Educated in Southern Europe	0.48*	0.28	0.27	0.22	0.19	0.19	0.19
Educated in Africa	0.71***	0.66**	0.64**	0.50**	0.47***	0.47**	0.53**
Educated in West Central Asia and the Middle East	0.47**	0.45*	0.44*	0.33*	0.28*	0.28*	0.32*
Educated in Eastern Asia	0.48***	0.45***	0.44***	0.34***	0.29***	0.30***	0.36***
Educated in Southeast Asia	0.24	0.25	0.24	0.17	0.14	0.14	0.17
Educated in Southern Asia	0.49***	0.48***	0.45***	0.35***	0.29***	0.29***	0.35***
Educated in Oceania	1.51	1.72	1.66	1.34	1.18	1.18	1.26
Established immigrants							
Educated in Canada	1.06***	1.03***	1.03***	1.01***	0.89***	0.89***	0.98***
Educated in North America	1.16***	0.89	0.86	0.67	0.58	0.58	0.64
Educated in Latin America	0.49***	0.44**	0.44**	0.44***	0.38***	0.38***	0.44***
Educated in Western Europe	0.75**	0.60	0.58	0.69**	0.70*	0.54	0.56
Educated in Eastern Europe	0.61***	0.54***	0.53***	0.46***	0.40***	0.40***	0.40***
Educated in Northern Europe	1.15***	0.89	0.86	1.01**	0.87**	0.87**	0.91**
Educated in Southern Europe	0.78***	0.69**	0.67**	0.61***	0.52***	0.52***	0.52***
Educated in Africa	0.79***	0.71***	0.69***	0.62***	0.56***	0.56***	0.63***
Educated in West Central Asia and the Middle East	0.42*	0.29	0.28	0.30*	0.28*	0.27*	0.30*
Educated in Eastern Asia	0.49***	0.44***	0.42***	0.38***	0.33***	0.33***	0.40***
Educated in Southeast Asia	0.48***	0.44***	0.43***	0.32***	0.27***	0.27***	0.32***
Educated in Southern Asia	0.40***	0.36*	0.34*	0.28**	0.23**	0.23**	0.28**
Educated in Oceania	1.51	1.06**	1.05*	1.34	1.18	1.18	1.26

* $p \leq 0.05$
** $p \leq 0.01$
*** $p \leq 0.001$
1. Reference category.

Note: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC.

Appendix 7

Odds ratios for working in the best corresponding or equivalent occupations: Eight selected occupations

The following table shows how the addition of a series of variables modify the likelihood of working in the best corresponding or equivalent occupation among immigrant paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight occupations selected through the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

The first column presents the likelihood of having a good education-job skills match for immigrant paid workers compared to Canadian-born paid workers with a postsecondary education by region of education. The other columns each present new adjusted odds ratios after controlling for certain variables. These additional variables, which could have an influence on the employment outcome of immigrants into the Canadian labour market, are: sex and age group, marital status and presence of children, province, territory and area of residence, language ability, visible minority status and the full/part-time and full/part-year status of employment.

Table A.7.1

Adjusted odds ratios for working in the best corresponding or equivalent occupations among immigrant paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications* by occupation and region of education, Canada, 2006

Effect	Immigrant status by period of landing by region of education	Sex and age group	Marital status and presence of children	Province, territory and area of residence	Language ability status	Visible minority status	Full/part-time and full/part-year status of employment
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
	odds ratio						
Canadian-born with a postsecondary education[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Architect							
Educated in Canada	0.64***	0.62***	0.63***	0.64**	0.66**	0.71**	0.71**
Educated in North America and Oceania	0.91	0.83	0.86	0.85	0.93	0.99	1.00
Educated in Latin America	0.17***	0.17***	0.17***	0.17***	0.18***	0.20***	0.21***
Educated in Western Europe	0.33**	0.31***	0.31***	0.31***	0.29***	0.30***	0.31**
Educated in Eastern Europe	0.24***	0.24***	0.23***	0.23***	0.24***	0.24***	0.27***
Educated in Northern Europe	0.49**	0.44**	0.41**	0.41**	0.44**	0.46**	0.47**
Educated in Southern Europe	0.30***	0.29***	0.30***	0.30***	0.32***	0.33***	0.33***
Educated in Africa	0.28***	0.26***	0.26***	0.27***	0.28***	0.32***	0.34***
Educated in West Central Asia and the Middle East	0.43**	0.40***	0.40***	0.41***	0.42**	0.47**	0.53**
Educated in Eastern Asia	0.33***	0.33***	0.32***	0.31***	0.36***	0.42**	0.45**
Educated in Southeast Asia	0.05***	0.05***	0.05***	0.04***	0.05***	0.06***	0.06***
Educated in Southern Asia	0.14***	0.14***	0.14***	0.14***	0.17***	0.19***	0.20***
Engineer							
Educated in Canada	0.79***	0.80***	0.80***	0.77***	0.78***	0.95	0.97
Educated in North America and Oceania	0.86**	0.88*	0.85**	0.83**	0.86**	1.04	1.10
Educated in Latin America	0.27***	0.27***	0.27***	0.25***	0.26***	0.32***	0.34***
Educated in Western Europe	0.78**	0.79**	0.77**	0.73***	0.71***	0.77**	0.84*
Educated in Eastern Europe	0.30***	0.31***	0.30***	0.28***	0.29***	0.29***	0.30***
Educated in Northern Europe	0.96	0.99	0.97	0.96	0.98	1.10	1.15**
Educated in Southern Europe	0.45***	0.46***	0.44***	0.43***	0.45***	0.44***	0.46***
Educated in Africa	0.34***	0.34***	0.33***	0.30***	0.31***	0.37***	0.41***
Educated in West Central Asia and the Middle East	0.34***	0.35***	0.34***	0.32***	0.33***	0.39***	0.44***
Educated in Eastern Asia	0.26***	0.26***	0.25***	0.24***	0.27***	0.35***	0.39***
Educated in Southeast Asia	0.08***	0.08***	0.08***	0.08***	0.08***	0.11***	0.11***
Educated in Southern Asia	0.22***	0.22***	0.20***	0.19***	0.20***	0.27***	0.29***
Medical laboratory technologist and pathologists' assistant							
Educated in Canada	0.60***	0.62***	0.60***	0.68***	0.67***	0.84	0.86
Educated in North America and Oceania	0.62	0.64	0.66	0.72	0.72	0.89	0.89
Educated in Latin America	0.33**	0.34**	0.35**	0.37**	0.38**	0.52*	0.54*
Educated in Western Europe	0.29**	0.30**	0.29**	0.29**	0.30**	0.32**	0.34**
Educated in Eastern Europe	0.20***	0.19***	0.19***	0.21***	0.20***	0.20***	0.21***
Educated in Northern Europe	0.51*	0.53*	0.50*	0.55	0.55	0.59	0.61
Educated in Southern Europe	0.28**	0.28**	0.29**	0.31**	0.31**	0.32**	0.37*
Educated in Africa	0.45*	0.47*	0.43*	0.46*	0.46*	0.59	0.67
Educated in West Central Asia and the Middle East	0.57	0.58	0.52	0.52	0.51	0.66	0.73
Educated in Eastern Asia	0.48**	0.49**	0.45***	0.49**	0.53**	0.75	0.82
Educated in Southeast Asia	0.40***	0.42***	0.40***	0.44***	0.42***	0.60**	0.61**
Educated in Southern Asia	0.23***	0.25***	0.22***	0.26***	0.25***	0.35***	0.36***

Table A.7.1 (continued)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among immigrant paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications* by occupation and region of education, Canada, 2006

Effect	Immigrant status by period of landing by region of education	Sex and age group	Marital status and presence of children	Province, territory and area of residence	Language ability status	Visible minority status	Full/part-time and full/part-year status of employment
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
	odds ratio						
Nurse supervisor and registered nurse							
Educated in Canada	0.69***	0.69***	0.68***	0.70***	0.72***	0.80**	0.81**
Educated in North America and Oceania	0.57**	0.62**	0.62**	0.67**	0.69**	0.72*	0.73*
Educated in Latin America	0.20***	0.21***	0.22***	0.22***	0.22***	0.26***	0.27***
Educated in Western Europe	0.23***	0.24***	0.24***	0.23***	0.23***	0.23***	0.23***
Educated in Eastern Europe	0.34***	0.34***	0.34***	0.35***	0.39***	0.38***	0.39***
Educated in Northern Europe	0.34***	0.41***	0.41***	0.44***	0.45***	0.48***	0.50***
Educated in Southern Europe	0.21***	0.22***	0.22***	0.23***	0.24**	0.24**	0.26**
Educated in Africa	0.29***	0.30***	0.30***	0.31***	0.31***	0.35***	0.38***
Educated in West Central Asia and the Middle East	0.31***	0.30***	0.30***	0.30***	0.31***	0.35***	0.36***
Educated in Eastern Asia	0.15***	0.15***	0.15***	0.16***	0.17***	0.21***	0.21***
Educated in Southeast Asia	0.23***	0.23***	0.23***	0.24***	0.25***	0.30***	0.31***
Educated in Southern Asia	0.16***	0.15***	0.15***	0.16***	0.16***	0.19***	0.20***
Licensed practical nurse							
Educated in Canada	0.58***	0.58***	0.57***	0.59***	0.59***	0.79***	0.60***
Educated in North America and Oceania	0.46***	0.49***	0.48***	0.52***	0.53***	0.58**	0.33**
Educated in Latin America	0.20***	0.21***	0.21***	0.20***	0.20***	0.32***	0.65***
Educated in Western Europe	0.57**	0.59**	0.57**	0.61**	0.60**	0.65**	0.24**
Educated in Eastern Europe	0.25***	0.24***	0.24***	0.23***	0.24***	0.23***	0.99***
Educated in Northern Europe	0.65***	0.76**	0.73**	0.79***	0.80*	0.96	0.28
Educated in Southern Europe	0.28***	0.29***	0.28***	0.27***	0.27***	0.27***	0.38***
Educated in Africa	0.26***	0.25***	0.24***	0.25***	0.25***	0.36***	0.25***
Educated in West Central Asia and the Middle East	0.19***	0.18***	0.17***	0.17***	0.19***	0.24***	0.54***
Educated in Eastern Asia	0.28***	0.28***	0.26***	0.28***	0.31***	0.51***	0.40***
Educated in Southeast Asia	0.22***	0.22***	0.21***	0.23***	0.24***	0.40***	0.53***
Educated in Southern Asia	0.29***	0.28***	0.26***	0.27***	0.30***	0.49**	1.16**
Pharmacist							
Educated in Canada	0.49***	0.49***	0.49***	0.51***	0.52***	0.55**	0.57**
Educated in North America and Oceania	0.45**	0.42**	0.42**	0.39**	0.40**	0.43**	0.46*
Educated in Latin America	0.06***	0.06***	0.06***	0.05***	0.05***	0.06***	0.06***
Educated in Western Europe	0.29**	0.25**	0.24**	0.23**	0.22**	0.23**	0.25**
Educated in Eastern Europe	0.09***	0.09***	0.09***	0.08***	0.08***	0.08***	0.08***
Educated in Northern Europe	0.90	0.74	0.72	0.69	0.76	0.80	0.88
Educated in Southern Europe	0.10***	0.10***	0.10***	0.10***	0.10***	0.10***	0.09***
Educated in Africa	0.42***	0.38***	0.36***	0.32***	0.32***	0.35***	0.36***
Educated in West Central Asia and the Middle East	0.18***	0.17***	0.17***	0.16***	0.16***	0.17***	0.19***
Educated in Eastern Asia	0.10***	0.09***	0.08***	0.09***	0.09***	0.10***	0.11***
Educated in Southeast Asia	0.04***	0.04***	0.04***	0.04***	0.04***	0.05***	0.05***
Educated in Southern Asia	0.06***	0.05***	0.05***	0.04***	0.04***	0.05***	0.05***

Table A.7.1 (concluded)

Adjusted odds ratios for working in the best corresponding or equivalent occupations among immigrant paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications* by occupation and region of education, Canada, 2006

Effect	Immigrant status by period of landing by region of education	Sex and age group	Marital status and presence of children	Province, territory and area of residence	Language ability status	Visible minority status	Full/part-time and full/part-year status of employment
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
	odds ratio						
Physiotherapist							
Educated in Canada	1.04	1.18	1.18	1.17	1.19	1.02	1.02
Educated in North America and Oceania	1.11	1.33	1.27	1.39	1.48	1.37	1.48
Educated in Latin America	0.22***	0.23***	0.22***	0.17***	0.18***	0.13***	0.14***
Educated in Western Europe	0.33***	0.42**	0.40**	0.39**	0.34**	0.33**	0.32**
Educated in Eastern Europe	0.16***	0.18***	0.17***	0.14***	0.14***	0.15***	0.14***
Educated in Northern Europe	1.47*	1.89**	1.91**	2.03**	2.08**	2.03**	2.04**
Educated in Southern Europe	0.18**	0.20**	0.19**	0.18**	0.18**	0.18**	0.18**
Educated in Africa	0.47	0.48	0.46*	0.41*	0.40*	0.36**	0.41*
Educated in West Central Asia and the Middle East	0.36*	0.41	0.44	0.37	0.39	0.31*	0.32*
Educated in Eastern Asia	1.38	1.64	1.49	1.46	1.99	1.30	1.39
Educated in Southeast Asia	0.07***	0.07***	0.06***	0.06***	0.07***	0.04***	0.05***
Educated in Southern Asia	0.87	1.03	1.03	0.93	1.02	0.67	0.77
Financial auditor and accountant							
Educated in Canada	0.83***	0.84***	0.83***	0.74***	0.73***	0.87***	0.88***
Educated in North America and Oceania	0.91	0.83*	0.81**	0.71***	0.71***	0.83*	0.87
Educated in Latin America	0.24***	0.22***	0.21***	0.19***	0.20***	0.25***	0.26***
Educated in Western Europe	0.67**	0.66**	0.65**	0.65**	0.63***	0.67**	0.72**
Educated in Eastern Europe	0.26***	0.29***	0.28***	0.25***	0.24***	0.24***	0.25***
Educated in Northern Europe	1.04	0.96	0.94	0.81**	0.81**	0.91	0.97
Educated in Southern Europe	0.23***	0.23***	0.22***	0.20***	0.20***	0.20***	0.20***
Educated in Africa	0.35***	0.32***	0.31***	0.28***	0.28***	0.34***	0.36***
Educated in West Central Asia and the Middle East	0.33***	0.31***	0.30***	0.28***	0.27***	0.32***	0.37***
Educated in Eastern Asia	0.28***	0.30***	0.28***	0.24***	0.26***	0.34***	0.38***
Educated in Southeast Asia	0.13***	0.13***	0.13***	0.11***	0.11***	0.14***	0.14***
Educated in Southern Asia	0.27***	0.24***	0.22***	0.19***	0.19***	0.25***	0.27***

* $p \leq 0.05$

** $p \leq 0.01$

*** $p \leq 0.001$

1. Reference category.

Note: Includes paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

Appendix 8

Odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential: Eight selected occupations

The following table shows how the addition of a series of variables modify the likelihood of having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year immigrant paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight occupations selected through the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

The first column presents the likelihood of having a good education-employment earnings match for full-time full-year immigrant paid workers compared to full-time full-year Canadian-born paid workers with a postsecondary education by region of education. The other columns each present new adjusted odds ratios after controlling for certain variables. These additional variables, which could have an influence on the employment outcome of immigrants into the Canadian labour market, are: sex and age group, marital status and presence of children, province, territory and area of residence, language ability and visible minority status.

Table A.8.1

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year immigrant paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications* by occupation and region of education, Canada, 2006

	Immigrant status by period of landing by region of education	Sex and age group	Marital status and presence of children	Province, territory and area of residence	Language ability status	Visible minority status
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Effect	odds ratio					
Canadian-born with a postsecondary education[1]	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Architect						
Educated in Canada	0.81***	0.75*	0.73*	0.72*	0.74*	0.91
Educated in North America and Oceania	0.72	0.59	0.58	0.55	0.58	0.70
Educated in Latin America and Africa	0.18***	0.16***	0.16***	0.16***	0.16***	0.23**
Educated in Europe	0.56**	0.44***	0.43***	0.41***	0.42***	0.45***
Educated in Asia	0.09***	0.08***	0.07***	0.07***	0.07***	0.12***
Engineer						
Educated in Canada	0.81***	0.78***	0.77***	0.75***	0.74***	0.84***
Educated in North America and Oceania	0.79**	0.68***	0.66***	0.64***	0.63***	0.72***
Educated in Latin America and Africa	0.34***	0.30***	0.29***	0.28***	0.28***	0.32***
Educated in Europe	0.50***	0.44***	0.42***	0.41***	0.41***	0.42***
Educated in Asia	0.19***	0.17***	0.16***	0.15***	0.15***	0.19***
Medical laboratory technologist and pathologists' assistant						
Educated in Canada	0.80	0.77*	0.79	0.51**	0.51***	0.51**
Educated in North America and Oceania	1.01	0.93	0.94	0.59	0.59	0.59
Educated in Latin America and Africa	0.19**	0.17**	0.17**	0.12**	0.12**	0.12**
Educated in Europe	0.24**	0.22**	0.22**	0.15***	0.15***	0.15***
Educated in Asia	0.39***	0.37***	0.38***	0.23***	0.23***	0.23***
Nurse supervisor and registered nurse						
Educated in Canada	1.16**	1.15*	1.17**	1.01	1.01	0.98
Educated in North America and Oceania	1.58**	1.49*	1.50*	1.25	1.25	1.24
Educated in Latin America and Africa	0.61*	0.58**	0.58**	0.49**	0.49**	0.48**
Educated in Europe	0.89	0.84	0.84	0.72**	0.72**	0.72**
Educated in Asia	0.92	0.91	0.93	0.75***	0.76***	0.72**
Licensed practical nurse						
Educated in Canada	0.91	0.92	0.92	0.91	0.93	0.81
Educated in North America and Oceania	0.52	0.52	0.53	0.54	0.55	0.53
Educated in Latin America and Africa	0.07**	0.07**	0.07**	0.07**	0.07**	0.06**
Educated in Europe	0.29***	0.30***	0.31***	0.30***	0.31***	0.29***
Educated in Asia	0.02**	0.02**	0.02**	0.03**	0.03**	0.02**
Pharmacist						
Educated in Canada	0.83*	0.81*	0.85	0.75**	0.76**	0.82
Educated in North America and Oceania	0.93	0.79	0.83	0.66	0.67	0.72
Educated in Latin America and Africa	0.93	0.84	0.87	0.71	0.70*	0.76
Educated in Europe	0.64**	0.60**	0.60**	0.51**	0.51**	0.53**
Educated in Asia	0.21***	0.19***	0.19***	0.16***	0.16***	0.18***
Physiotherapist						
Educated in Canada	1.26	1.15	1.15	1.06	1.07	0.99
Educated in North America and Oceania	1.84	1.60	1.59	1.31	1.34	1.27
Educated in Latin America and Africa	1.36	1.16	1.15	1.04	1.03	0.91
Educated in Europe	1.35	1.13	1.13	0.97	0.97	0.96
Educated in Asia	0.88	0.79	0.78	0.65	0.68	0.57

Table A.8.1 (concluded)

Adjusted odds ratios for having earnings at or above the median for the occupation corresponding best to the highest postsecondary credential among full-time full-year immigrant paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications* by occupation and region of education, Canada, 2006

	Immigrant status by period of landing by region of education	Sex and age group	Marital status and presence of children	Province, territory and area of residence	Language ability status	Visible minority status
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Effect	odds ratio					
Financial auditor and accountant						
Educated in Canada	1.03	1.05	1.04	0.91**	0.90**	0.82***
Educated in North America and Oceania	1.28*	1.14	1.11	0.97	0.98	0.90
Educated in Latin America and Africa	0.41***	0.36***	0.36***	0.31***	0.31***	0.28***
Educated in Europe	0.60***	0.61***	0.60***	0.52***	0.52***	0.50***
Educated in Asia	0.29***	0.29***	0.27***	0.23***	0.24***	0.21***

* $p \leq 0.05$
** $p \leq 0.01$
*** $p \leq 0.001$

1. Reference category.

Note: Includes full-time full-year paid workers aged 25 to 64 who reported a postsecondary credential in a field of study that would normally lead to work in one of the eight selected occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

Endnotes

1. Individuals in the labour market may be either paid workers (that is, working for an employer) or self-employed. The analysis in this report focuses on individuals who are paid workers.
2. Individuals aged 25 to 64 are more likely than other age groups to have completed school and be available for participating in the labour force.
3. Individuals are said to be working in an equivalent occupation when, although not working in the occupation corresponding best to their field of study, they reported working in an occupation requiring similar or higher skill levels (e.g., individuals with credentials in engineering working as architect).
4. The job reported was the one held in the week (Sunday to Saturday) prior to enumeration (May 16, 2006) if the person was employed, or the job of longest duration since January 1, 2005, if the person was not employed during the reference week. Persons with two or more jobs in the reference week were asked to provide information for the job at which they worked the most hours.
5. It should be noted that the likelihood of being employed full-time for the full year may not be entirely attributed to the effect of 'time elapsed since landing' since compositional change of immigrants who landed during different periods, labour market conditions as well as other factors may also contribute to differences among groups.
6. Although 'Occupational therapists' was part of the occupations selected through the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*, this occupation was not identified by the FCR Program and HRSDC and is thus, excluded from the present analysis.

Culture, Tourism and the Centre for Education Statistics

Research Papers

Cumulative index

Statistics Canada's **Division of Culture, Tourism and the Centre for Education Statistics** develops surveys, provides statistics and conducts research and analysis relevant to current issues in its three areas of responsibility.

The **Culture Statistics Program** creates and disseminates timely and comprehensive information on the culture sector in Canada. The program manages a dozen regular census surveys and databanks to produce data that support policy decision and program management requirements. Issues include the economic impact of culture, the consumption of culture goods and services, government, personal and corporate spending on culture, the culture labour market, and international trade of culture goods and services. Analysis is also published in *Focus on Culture* (87-004-XIE, free, http://www.statcan.ca/bsolc/english/bsolc?catno=87-004-X).

The **Tourism Statistics Program** provides information on domestic and international tourism. The program covers the Canadian Travel Survey and the International Travel Survey. Together, these surveys shed light on the volume and characteristics of trips and travellers to, from and within Canada.

The **Centre for Education Statistics** develops and delivers a comprehensive program of pan-Canadian education statistics and analysis in order to support policy decisions and program management, and to ensure that accurate and relevant information concerning education is available to the Canadian public and to other educational stakeholders. The Centre conducts fifteen institutional and over ten household education surveys. Analysis is also published in *Education Matters* (81-004-XIE, free, http://www.statcan.ca/bsolc/english/bsolc?catno=81-004-X), and in the *Analytical Studies Branch research paper series* (11F0019MIE, free, http://www.statcan.ca/bsolc/english/bsolc?catno=11F0019M).

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